

Challenge

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CHALLENGE NOTES

Stocks become "wages"; the Internal Revenue Service creates a social problem; advertisers learn that consumers are human; how not to save the coal industry

EVERY NOW AND THEN something happens which upsets the rigid formulas of the economists and helps make life more interesting. The recent ruling of the National Labor Relations Board compelling companies with stock-purchase programs for their employees to bargain with union representatives over terms is a case in point. If, as the NLRB ruled, such stock-purchase plans really amount to "wages," and are, therefore, a legitimate subject for collective bargaining, our traditional concepts of "labor" and "capital" will have to be revised. If the capital returns of labor are to be settled by collective bargaining (with all this entails in terms of strike threats, etc.) rather than by prevailing market conditions, where does that leave the independent stockholder with no union to bargain for him? On the other hand, if the union becomes the stockbroker as well as the wage bargainer of its membership, what will happen to those workers who

own no company stocks and depend on union representation to boost their sole source of income: wages? When it comes to deciding between higher wages and higher dividends—a dilemma that, up to now, only management has had to face—what will the union decide? At present, these questions are largely theoretical since stock-purchase programs amount to only a small portion of the total shareownership of American industry. Still, unless higher courts reverse the NLRB decision (and many lawyers believe there is an excellent chance that the decision will be reversed), they are questions that will have to be answered some day.

Income Exposé

A FAVORITE PASTIME of many Americans—guessing how much our neighbors really make—is going to receive considerable encouragement from the new Federal tax forms just put out by the

Internal Revenue Service. Here's the clue: If you see the mailman deliver an income tax envelope with a red stripe running through the middle, you'll know that your neighbor made less than \$10,000 in 1953. If the envelope has a yellow stripe he made more than \$10,000. Like so many bureaucratic innovations, the idea works fine administratively, but many people don't like to expose their financial life in hotel lobbies or boarding room hall tables. IRS admits they never thought of these sociological implications.

"Normal" Unemployment

ONE OF THE key issues of the recent elections was employment, or rather the lack of it. Democrats claimed that the Administration was indifferent to the plight of the unemployed, and Republicans countered by pointing to recent declines in unemployment—a drop of 385,000 in the number of unemployed from September to October. Besides, they claimed, wasn't it ex-President Truman who—in an unguarded moment no doubt—thought it quite normal for 3-5 percent of the total labor force to be unemployed? A lot of Republicans have, of course, been saying the same thing in private. Just what is "normal" unemployment? Certainly, unemployment is never

"normal" for the person who wants work and can't find it. On the other hand, technological change unavoidably brings with it a certain turnover in manpower, and there is no industrial society on earth able to keep all its (growing) labor force *productively* employed all the time—the "full" employment of totalitarian countries such as the Soviet Union covers a lot of hidden unemployment in prisons, slave labor camps, etc. The question to ask, therefore, is not whether a certain number of unemployed is "normal," but rather whether such unemployment is the result of technological improvement or structural changes in the economy, or whether it is attributable to a decline in production.

Dollars as a Weapon

OUR ATTENTION was caught recently by a small news item tucked away inconspicuously in the back of our morning newspaper. It seems that an organization calling itself the Committee of American Labor and Industry for Foreign Aid Through Higher Living Standards has been formed for the express purpose of arousing public opposition against continued aid for countries in which industry has not "raised wages at least 25 percent as an initial step toward attaining

American standards." Members are pledged not to buy the products of countries in which wage levels have remained unchanged. Now, we sympathize with the aim of raising living standards overseas and there can be little doubt that recipients of Foreign Aid or U. S. exports have not always passed these benefits on to labor and have thus greatly limited purchasing power at home. On the other hand, using our dollars as a "weapon" seems a questionable way of going about this problem. For, by cutting off the flow of dollars to these countries or by refusing to purchase their goods, we actually make it more difficult for labor abroad to make its demand for higher wages really stick.

Solar Power Stoves

WHAT CAUSES one particular invention to be accepted and another rejected? In a recent address, Charles G. Abbot of the Smithsonian Institution in Washington told a group of businessmen that solar power machines or stoves have already been satisfactorily produced on a laboratory scale and are awaiting mass production by private enterprise. Abbot estimates that a workable heat collector, including boiler, might be made to sell for \$1,000 and probably could be built from

semi-fabricated materials costing about \$300—although labor costs would account for much of the difference. Still, the field is wide open and potential profits are high. Why, then, has no manufacturer taken the initial plunge? The answer seems to be that industry does not foresee a fuel shortage in the near future and is unwilling to invest in a long shot.

Competition and Coal

CAN A declining industry be saved by limiting competition? People still seem to think so, apparently. Last month the National Coal Association and John L. Lewis, president of the United Mine Workers, came out in favor of reducing residual oil imports "in order to keep the coal industry in a strong position and in a position to satisfy anticipated increased coal demand in the future." Leaving aside the question whether oil imports have any direct effect on the demand for coal (and the evidence is by no means conclusive), we are still left with a fundamental economic problem: Can demand for a product be created by imposing limits on the sale of competing products? If oil-users must take coal instead, even though coal is technically less efficient and adds to production costs, will this benefit the coal industry in the long run?

Probably not, for producers will sooner or later find an alternative fuel—as they always have in the past. Even more important, it certainly won't help the nation as a whole.

Desire to be Different

IN AMERICA, it is generally agreed, the consumer is king. In no other country does industry expend such a large share of its budget on attempts to woo him and in no other country are such attempts more successful. Lately, however, there has been growing awareness among the practitioners of consumer research that many modern advertising techniques are based upon outworn concepts of human behavior. For, the consumer is neither rational nor irrational as such; he is an individual who responds differently to different merchandising techniques. This point is brought home in a recent study on *Consumer Behavior* sponsored by the Committee for Research on Consumer Attitudes and Behavior and published by New York University Press. The authors find that, as the real income of Americans continues to rise and the amount of available leisure time increases, our needs become more and more individualized. Advertising appeals based on such slogans as "more people smoke cigarette X

than any other cigarette on the market" may backfire. More and more, the members of the advertising fraternity are catching on to a basic principle in evaluating consumer behavior: consumers are people and people like to be different.

Better Mousetraps

A 3-D GAME of tic-tac-toe . . . a puncture-proof innertube . . . shingles that seal in place . . . a revolving door that turns by itself . . . frozen ham sticks similar to the familiar fish sticks . . . tomato juice in powder form . . . stretchy fabrics that will fit kids as they grow . . . a new swivel frame that allows trucks to keep all four wheels on the ground, no matter how rugged the terrain may be . . . mint-flavored ginger ale . . . a cure for potato sprouting . . . a beer stein with a built-in bell which rings for more when empty . . . battery-heated socks for sportsmen . . . electric scissors . . . a new automobile exhaust system which does away with tail-pipe protrusion and cuts in half the concentration of gases . . . jeweled smoking pipes for the ladies . . . electric blankets *that turn themselves off* . . . and, finally, a pocket-size 3-D photoviewer which not only shows the potential customer the product in depth but lets him smell it as well.

a personal note

from the editor

*some random thoughts on the
automobile—1955 style*

THE PAST FEW WEEKS have been particularly trying for the people of the United States. First, there were the elections, followed almost immediately thereafter by the Senate debate on the pros and cons surrounding one of its own members. Now, even while the smoke of political battle still hangs heavy, the nation has been thrown into yet another dither—this time by the parade of new 1955 automobiles. They arrive one by one, each model and make accompanied by all the glitter and noise of a supercharged Hollywood premiere. Try to pick your favorite—just try.

But who can stand unmoved before that wonderful, indispensable, distinctly American-bred creature on wheels? The *genus automobilis*: fathered by human ingenuity and mothered by mass-production technology; ageless, yet always excitingly different with its annual mutations; never failing to shake young and old out of the doldrums, and always raising hopes of still better things to come. The automobile is a symbol of America's promise and fulfillment.

* * *

THERE IS, UNHAPPILY, one character I know about who *can* stand before a sleek 1955 car and be inspired to feel nothing but bitterness. According to him, every one of the substantial improvements in the new models could have been made available to the public ten years ago. But manufacturers like to hold up new developments until "they've had a chance to soak the public first."

When you press this Scrooge for details, he tells a story about a friend of his who bought a brand-new car (in 1952). The man drove his car out of the showroom with the usual gift of a tankful of gas. About one month and six hundred miles later, the fuel gauge still showed a tank more than half-full. For some unaccountable reason, this worried the man, especially after a gas station attendant verified his worst suspicion—that, indeed, there was plenty of fuel in the tank. The man thereupon took the car back to the dealer. The skeptical dealer called the manufacturer. With a thousand apologies, the manufacturer

took back the "experimental" car and replaced it with a spanking new production model. The man is happy now, gassing up regularly like everyone else. But, according to Scrooge, it all goes to prove that the manufacturers *are* holding back.

THIS IS AN ASTOUNDING TALE, to be sure. It shows real imagination. Offhand, I can think of five or six reasons why it isn't a true story. But let us be fanciful and imagine that it really did happen. Does the existence of this "superior" car prove that the public is being fleeced when it buys the "inferior" production models?

Hardly. It isn't a matter of superior vs. inferior at all. Rather, it is a question of choosing between the possible and the impossible in terms of mass production practicability. Today's stock cars are built with today's tools and know-how, produced at a cost manufacturers can meet and sold at a price the public is willing to pay. The dream cars of the future, so painstakingly put together, are the end-products of a labor of love—created in response to the challenge of tomorrow.

The automobile manufacturers have made no bones about what they hope to accomplish. The leading companies have put on display their dream models of the future. In the meantime, however, today's equipment must be paid for (and provisions set aside for the future) by producing and selling today's car. If everyone held off making and buying today, in anticipation of the ultimate accomplishments in the infinite future, we surely would have nothing now and forfeit the future, as well.

Now, that "experimental" car in Scrooge's story must have had a new-type carburetor, in all likelihood a vastly more efficient engine, probably an improved transmission, etc., etc.—to say nothing of a new-type fuel to burn. To mass-produce such a car, the automotive industry would have to scrap, immediately, not gradually, its entire production facilities presently valued in the billions. It would have to start from scratch. What do you suppose that "superior" car will cost you, when it finally comes off the new assembly line? You won't want to pay the price. It takes time to make a dream come true.

As for Scrooge, if he has any ideas that will help to sell automobiles—without necessitating impossible changes—I know of several manufacturers who would like to see him right away. They can't afford to hold back anything in the kind of race they are running. I wish I had some ideas. A little extra money would come in handy right now. I've got my eye on a honey of a 1955 car.—H. B.

The figures which go into our gross national product compilations are incapable of fulfilling the role we have mistakenly assigned to the GNP—namely, an indicator of the state of the economy.

HOW RELIABLE IS GNP?

by Lewis H. Haney

THE AMERICAN PENCHANT for big things and broad generalizations may explain the attention now being given to an index that undertakes to show the total output of the United States for a given year or quarter. This index is termed the gross national product and is familiarly known as GNP. The latest estimate for 1953 is \$364,900,000,000. This is supposed to represent the "total value of goods and services produced by the nation" in that year.

But, as will be seen, the manner of estimating the GNP results in a confusion between what is really produced and what is merely spent. The gross national product, as now estimated, is really the sum of all domestic expenditures by individuals as consumers, by the government, and by business, plus net purchases abroad. It is assumed that when there is an expenditure, some product is being bought. But is the thing bought always worth the money? It is also assumed that money spent by one person is income for another. But is the in-

come always earned by real production? Clearly these assumptions are not safe unless we consider where the money comes from and for what it is spent.

Is all spending productive? Is it possible to assume that the more money we spend, the more products we will have?

These questions suggest that it is unfortunate to have used the word "product" in the name of the index. It inevitably leads people to believe that if the GNP falls, then our national product is really falling and the economy is in a state of contraction. But this is not always true. Similarly, it is not always true that if the GNP is rising, the national production is rising, with all of the benefits to the citizenry that this implies.

Of course, this confusion also appears when the GNP is used in business forecasting. The acid test of the truth of a principle is always found in attempts to predict the results that should follow from the conditions that are assumed to be causal.

A study of the record will show that most economists who have judged the economy according to the gross national product index were bearish (pessimistic) in the period from 1946 to 1948. Their emphasis on Government spending as a dominant force in the economy led them to under-emphasize the importance of spending by individuals and businesses and to overemphasize the difficulties of the transition to a peacetime, normal economy.

In November and December of 1951, however, two prominent groups of economists were over-optimistic in predicting a period of continued expansion. They predicted that in 1952 the GNP would rise 3 to 5 percent above the 1951 level. The impact of Government defense spending was supposed to prevail, and inflationary pressures were to have their way. (Is this an admission that a little inflation is a good thing?)

But by September 1952, one group sadly noted that inflationary pressures had not worked, largely because of consumer apathy, and that a six-month lull had occurred in the "civilian sector." The forecast was wrong.

A well-known economist predicted that there would be no

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slump in business activity during the second half of 1953. He rested his forecast on Government spending for defense and public works projects, and on consumer spending, which was supposed to rise because of an increase in disposable personal income. Other GNP economists late in 1953 or early in 1954 stated that economic expansion was going on and predicted that there would be no decline in production in 1954.

And Dr. Arthur F. Burns, Presidential economic adviser, was optimistic in the spring of 1954, partly because of the announced plans of business to continue spending heavily for new plants and equipment.

But the optimistic economist of 1953, writing in April 1954, said: "For nine months production has been slowly dropping and employment is about 1.4 million less than a year ago." In September 1954, it was officially announced that declining business outlay had occurred and was continuing, so that the total for the year would be \$1.6 billion less than in 1953.

What these erroneous forecasts had in common was that a reliance was placed upon the expenditure of money *per se*, which makes up the so-called gross national product—with special emphasis on Government spending. This led to a reliance upon inflationary pressures and Government

controls. Also involved was the treatment of mere changes in inventory as representing "investment" or "production," and of consumer spending—as if consumer spending were directly related to consumer income and somehow preferable to saving. Finally, there was a source of error in the acceptance of announced business plans for plant and equipment expenditures regardless of the conditions affecting individual motives and the outlook for profits.

These assumptions are all inherent weaknesses of the national income approach, including the gross national product aggregate. But the fundamental weakness of the GNP estimate is the economic analysis on which it rests. This stems from the theories of the British economist, John Maynard Keynes, as applied in America between 1934 and 1947. Central government control over economic life, largely by monetary and credit devices, is the outstanding characteristic.

There is a constant confusion between spending and production, and in general spending is substituted for production in the gross national product figures. The gross national product is admittedly not product at all. It is the sum of paper dollars spent, many of them not for production. It can, and sometimes does, go up

or down regardless of the volume of production.

This is much like trying to figure out what a family produces in a given month by estimating what it spends in that month. Undoubtedly, some of what the family spends in a given month (really spends, not just "spending" in the bookkeeping sense) will eventually result in an income to others at another time. But the relation between expenditure and income is not necessarily the same as the relationship between what is spent by this family and what is actually produced in the given month by it, or for it.

SUPPOSE you were to consider the housewife's budget for food and clothing, the children's allowances, the amount paid for help, rent, interest, repairs and maintenance, club dues, liquor, tobacco and social expenses, the charge accounts at the stores, etc. How close do you think such an estimated list of items (partly prorated charges and largely unrelated to energy, time or skill put into productive activity) would come to representing the sum of the output by the father, mother, daughter, son and hired help in the shape of goods and services? It would be wide of the mark for a given year. It would show a grotesque lack of relation to output for a given month.

So it is with the gross national spending, now miscalled gross national production. This is not production at all; first because it does not consist of products; second because it is figured in dollars which means price variations that cannot possibly be allowed for. It is often not related to production or earned income since it includes individuals who spend incomes that are not derived from any current productive activity; also bad debts that are written off during the period, imputed rent from houses occupied by owners and contributions to private welfare and pension funds, etc.

It is also inadequate and liable to misinterpretation because it does not allow either for the great difference in the way labor, capital, enterprise and land are supplied, or for the necessity of rewarding those who supply the services of these factors. And the relation of interest to saving and investment is also distorted, because saving is assumed to cut spending and, therefore, to reduce GNP! Capital is hidden under the term "property."

Equally bad is the other great weakness of the GNP—the assumption of a direct relation between spending and income, and the treatment of spending as a source or cause of income. This is the key to Keynesian economic policy, typified by pump-priming.

The notion that the more we spend, the more income we have ignores both the matter of reserves and the question: *What is the money spent for?*

The devotees of GNP see no limit to total debt as long as the borrowed money is spent in one way or another. But what if the dollars are wasted carrying surplus potatoes or butter, or go up in the smoke of war? What was produced? Between 1942 and 1945, for example, the GNP soared solely because of Government spending for war. Since 1948 the total Commodity Credit Corporation "investment" in surplus farm commodities has risen from about \$500 million to over \$6 billion. What was produced here? Of such is the so-called "total value of goods and services produced by the nation"—the GNP.

THE ATTEMPTS to pinpoint the gross national product for a specific period are considerably wide of the mark. Much of the income that may be available is not actually spent in the period in which it is received. In fact, the national income and GNP estimates cannot give us a true total for any given period. How could they, when they assume that what "A" spends is at the same time "B's" income? "A" had to earn his income in a past period, and "B" cannot receive his payment from

"A" until after "A" has had it to pay and has acted. The sum of "A's" payment to "B" and "B's" receipts from "A" cannot be the total income for any given period.

SUCH difficulties with time lags are the reason for the treatment of installment purchases as *spending* in the month they are made, and as *saving* in subsequent months when payments on such purchases are made. They also explain why the GNP adherents, in reporting the GNP total, assume that prices are constant. But they figure inventories of goods, outside the household, at changing current prices. The latter course then leads them to call any estimated increase in inventories an addition to the GNP. Certainly any accountant will agree that no figure which includes inventories can be production, but must be related to sales.

To cap it all, GNP treats fixed capital differently from working or circulating capital. Business inventories are circulating capital, and, as just noted, changes in them go into the GNP. But changes in fixed or durable capi-

tal through depreciation are not allowed for. This discrimination between fixed and circulating capital is one of the fatal weaknesses of Marxian economics.

Recent statements made by two well-known financial institutions illustrate how the aggregate spending estimates of GNP mislead and confuse. One, in New York says: "To a very large extent the increase in the national income over the eleven-year period was not a measure of economic growth, but an evidence of price inflation." The other, in Chicago, says: "The extent of the decline over the past year in important segments of the economy is not generally realized because of the very moderate change in aggregate activity." To paraphrase an old saying, we cannot see the trees for the forest.

No true national product or national income index will ever be attained by trying to make impossible accounting estimates based upon the assumption that the United States, as a nation, is a business enterprise which produces goods and services by mere spending. ■



Hungry World

AVERAGE FOOD CONSUMPTION of two-thirds of the world's people, more than a billion human beings, is barely enough to support life—2,000 calories a day—and even this subsistence diet is usually lacking in some essential nutritive elements.

STOCKPILE FOR PLENTY



A banker presents here an unusual plan which, he believes, would eliminate future minerals shortages and provide underdeveloped areas with the dollars they need for economic progress

WE AMERICANS have always thought of ourselves as a people of plenty, America (and particularly the United States) has always been a symbol of natural wealth to the rest of the world. California, for example, came to be known as El Dorado after the discovery of gold there in 1848—named after the legendary city whose streets were paved with gold. Rich farming lands and virgin forests, inexhaustible mines and oil wells that would gush forever—this was, and in many parts of the world still is, the traditional picture of America. Many of us continue to cherish

the illusion that our supply of raw materials is inexhaustible.

It, therefore, comes as something of a shock to learn that we have been transformed during the last fifty years from a "have" into a "have-not" nation, as far as our supply of many essential raw materials is concerned. Our huge food surpluses have somewhat obscured the fact that we are becoming increasingly deficient in the raw materials needed for industrial expansion. The President's Materials Policy Commission in its epoch-making study (the famous Paley Report), which covered out past, present and future resource requirements, revealed that while in 1900 the U.S. produced 15 percent more raw materials (excluding food and gold) than it consumed, that an-

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nual surplus had changed into a deficit of 9 percent by 1950. And all responsible estimates of future needs point to a rapidly widening gap between our growing raw material demands, on the one hand, and our diminishing raw material supplies, on the other. Thus, the Paley Commission's Report foresaw a raw material deficit of 20 percent by 1975, and many experts believe that even this figure may be excessively conservative. In any case, there is general agreement that by 1975 we shall be importing more than five billion dollars worth of raw materials, at 1950 prices.

IT IS my firm conviction that we can prepare ourselves for such an eventuality now by establishing a privately financed stockpile program for the importation of foreign minerals in excess of current needs. The aim of such a stockpile program would be to preserve the per capita mineral position of the United States by endeavoring to accumulate annually, from foreign sources, the amount of each important mineral domestically consumed or exported. The specific amount to be added to this accumulated "depletion reserve" each year would be determined by a national inventory of current mineral reserves and projected mineral needs. The amount could then be further adjusted accord-

ing to the amount of annual recovery in the form of scrap—with additional adjustments in keeping with the development of new natural and synthetic resources at home.

The reserve would be available for processing only when, in the opinion of the stockpile agency administering the program, our own domestic minerals production, together with the supplies currently available from foreign sources, proved insufficient to meet the needs of industry. Such a program would in no way affect the price of our domestically mined resources, since imports under the stockpile plan would be subject to the same tariffs as ordinary imports. We would in this way continue to make the maximum use of our own resources, but at the same time we would be offsetting the depletion of our mineral reserves by stockpiling from foreign sources.

The cost of this program would be, in large measure, financed by private capital, and the stored minerals would be privately owned even though their use or sale would be regulated by the Government. The funds for this purpose would be made available by the Government's granting exceptionally liberal depletion allowances to mineral producers. A condition for the granting of such an allowance would be that part of the tax

money thus withdrawn be used for the development of new domestic sources of supply, and part for the purchase of foreign minerals for the stockpile. The mining industry should welcome such a program, for it would, in effect, enable them to lengthen the life of their reserves with funds that would otherwise be lost to the tax collector.

Actually, the privately owned, but publicly regulated, use of mineral resources is not a new idea. Our vast oil reserves, for example, are the property of individual owners, but the state authorities determine the amount that may be withdrawn during a given period on the basis of prevailing market conditions. Under the proposed stockpile plan, the same conditions would apply in determining withdrawals. In other

words, the stockpile program I am suggesting differs from existing programs principally in that it would be a long-term rather than an emergency measure and would not include domestically produced minerals. For, in the long run, we are not adding to our store of natural wealth by accumulating stockpiles of domestically mined minerals. By moving minerals from mines to storage, we are merely changing their location, but we are not adding new wealth to offset depleted reserves, as in the case of imported minerals.

These are, of course, the bare outlines of an idea, and much detailed study is necessary before it can be converted into a reality. But it is my firm conviction that the idea is sound and businesslike and, if properly implemented, could help alleviate several long-

From Scarcity to Abundance

THE WORLD HAS JUST STARTED the ascent from scarcity to abundance. Only 11 percent of the world's population live in countries on a "high" level of economic development and about as many live in areas with an economy of "medium" type, according to modern standards. The predominant economy of the world is still the traditional tillage of soil, handwork and small-scale local trade. . . .

Since the beginning of civilization, wealthier nations have been the bearers of economic progress to other peoples. Often they played this role unwillingly; they were unable to hide their superior technique from the rest of the world even when they did their best to keep it for themselves. . . . The peculiar feature of the present position of the United States is its acceptance as the goal of its foreign policy the reduction of the gap between its standard of living and that of the rest of the world.—*From the epoch-making study of world resources by W. S. and E. S. Woytinsky, "World Population and Production," The Twentieth Century Fund, New York, 1953.*

standing economic problems. It would do so, moreover, in the American way of privately financed trade rather than through short-range Government aid and subsidies.

LET US look for a moment at some of the results which, I believe, would flow from such a stockpile program, if adopted. In the first place, as we have already mentioned, it would assure us of the mineral resources without which continued industrial expansion is impossible. At present, the United States, with only 7 percent of the world's population, uses about 50 percent of the world's mineral supply. As our population keeps increasing and industry expands, our mineral needs will grow proportionately. At the same time, demands on the available world supply of resources will grow as the so-called "underdeveloped areas" begin to industrialize and their need for minerals increases accordingly. The time to begin such a stockpiling program, therefore, is now, when our trading position is strong and the available world supply of minerals is still ample. Besides, we cannot and should not rely on the discovery of new synthetics to fill the void of depleted mineral resources, since synthetics, more often than not, bring with them new resource requirements. The

only way that we can prepare for a prosperous future is by replacing the natural wealth we consume and adding new mineral wealth in line with our future needs.

Another important benefit accruing from such a program is the new opportunities it would provide for the millions of people living in the underdeveloped areas of Asia, Africa and Latin America—people whose short lives are spent in a continual struggle against hunger and disease. Since it is precisely these areas that would benefit most from an expanded mineral stockpile program—the bulk of the world's available mineral wealth is located in the underdeveloped nations—we would know that our dollars are being used where they can do the most good. We would be doing this, moreover, through "trade, not aid." Our dollars would be moving abroad in exchange for value received, not as outright gifts. The proposal of such a program could not inspire fears and suspicions concerning our motives—an accompanying condition which has plagued our Foreign Aid Program so much. By dealing with all nations as equals in the realm of world trade—each needing the products of the other—the stockpile program would help to create understanding and cement friendships that are unlikely to result

from the charitable posture we have so often assumed.

THIS BRINGS us to the third important advantage of a stockpile program such as I propose. Since every dollar expended on mineral imports must eventually be returned to the United States for redemption in American products, we could evidently look forward to a substantial expansion of our foreign markets. And these new markets would help to stimulate our industrial expansion, provide jobs for our growing work force and increase purchasing power and markets at home.

We hear a great deal nowadays about "built-in economic stabilizers" such as unemployment insurance and similar measures which, it is claimed, have made violent depressions such as we experienced in the Thirties a thing of the past. While such measures are unquestionably desirable and necessary to protect us against the downswings of the business cycle, they do not solve the problem of how to keep all hands and machines *productively* employed, that is, generating wealth for all. For real wealth can only be created through productive efforts seeking to satisfy genuine human needs. "Stabilizers" may serve to divide the pie in thinner slices and thus make it go farther, but they cannot bake a bigger pie!

Most economists agree that in order to maintain a condition approximating "full" employment, we must maintain an annual rate of increase of our gross national product (the total value of goods and services at a particular time) of at least 3 percent. President Eisenhower, in a recent address before the National Security Industrial Association, foresaw a gross national product of five hundred billion dollars within the next ten years, which would mean an even higher rate of increase. In the same speech the President stressed the expansion of foreign trade as one of the best means for attaining such a high level of activity while at the same time retaining the free enterprise characteristics of our economy. It is my firm conviction that a stockpile program along the lines that I have indicated in this article should go a long way to foster such trade, not through Government-subsidized gifts of American goods, but through a sound, business-like exchange of real wealth.

Given the means to trade, there can be little doubt that American businessmen would soon be on their way to the far corners of the earth laden with American goods, returning to home ports with their ships bursting with the materials needed to assure the future of our nation. ■

The development of titanium is an example of the business know-how and technological research it takes to create a new metals age

How Wonder Metals Arrive

by Stanley H. Brown



THE GIANT Union Carbide & Carbon Corp. announced early this fall that its Electro Metallurgical Co. was building a thirty-two-million-dollar plant for the production of titanium. To be erected at Ashtabula, Ohio, the plant will turn out 7,500 tons a year. This output will more than double the present total production of this rare metal. It is just a harbinger of things to come.

In 1946 we had less than one hundred pounds of titanium in the country. It is being developed today at a rate without precedent in history and in a way that reveals significant new aspects of competition and technological progress in the American economy. For one thing, titanium has become a vital ingredient of jet aircraft. The latest model planes are using more than one ton each in their engines and frames. But beyond this, titanium has captured the imagination of technical men who see it as "the most

promising new metal in almost a century." They are intrigued by its amazing properties: half the weight of steel, great strength, almost completely noncorrosive and extremely high resistance to heat. It is extracted from a blackish mixture called ilmenite, a compound of titanium, iron and oxygen, scattered abundantly throughout this continent and the rest of the world.

But much as physical properties may interest technical people, the decisions to make a product—in this case titanium—often are based on other considerations. And the major factor in any industrial decision today is the almost universal urge to diversify.

Few big concerns are willing to stick with a single product or even within a single industry. More and more of the corporate

dollar is going into research to develop new products and acquire new markets. To a great extent, the story of titanium is the story of diversification in industry.

Long before there was enough of the metal for inclusion in production models, producers knew that the properties of titanium made it ideal for use in jet engines. Assistance was sought from the Government to develop sources. Government agencies in turn went to private industry for help. In 1948, E. I. du Pont de Nemours & Co., Inc. started to produce titanium in small quantities.

The first company set up exclusively to extract and fabricate the metal was the Titanium Metals Corp. of America—jointly owned by the National Lead Co. and the Allegheny Ludlum Steel Corp. National Lead has had years of experience in mining and refining metals. Allegheny Ludlum is a major producer of stainless steel. Titanium offered both companies an exciting opportunity to diversify.

Union Carbide, on the other hand, has been making steel alloys for fifty years and ferro titanium, an ingredient of alloy steel, for about two decades. Thus, titanium metal was a natural field for

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Union Carbide when the right time came.

The thirty-two million dollars Union Carbide is investing in a new plant is its own money. But it has signed a contract with the General Services Administration, under which the Government agrees to take any metal the company cannot market through regular industrial channels. On the face of it, this might sound like some kind of insurance policy for Union Carbide. Actually, it doesn't include a guarantee against losses of any kind. The Government will buy any surplus at the prevailing market prices. But Union Carbide has to take the chance of producing the metal at the right price.

Several other companies are moving into the field. Dow Chemical Co., giant producer of lightweight magnesium, as well as many industrial chemicals, will have a small plant in operation early in 1956. Dow's products now cover a wide range, and titanium, if it meets expectations, will make a welcome addition to the list.

CRANE COMPANY, a Midwestern producer of valves, pipes and plumbing equipment, will have a big plant in operation soon. The goal is to hit 6,000 tons annually sometime toward the end of this year. Titanium is expected to be a valuable material for pipes of all kinds, especially where corrosion

is an important factor. With its own source of titanium, Crane will have expanded handily into an adjoining industrial area.

The current price of raw titanium is about \$4.70 a pound. Unfabricated aluminum costs about 20 cents a pound. In some fabricated forms, titanium presently runs as high as \$20 a pound, clearly too high a price for wide use.

THE EXPERIENCES of early producers have shown that refining titanium is an arduous and costly process. Most of the difficulty arises from the fact that molten titanium, in its pure state, is highly reactive and combines with almost anything around it, including air. Crane, Dow, Du Pont and Titanium Metals are refining titanium with a system known as the Kroll process. Union Carbide's new plant will vary one of the ingredients of that process. By and large, all of these firms are banking on increased know-how and stepped-up output to cut production costs.

A newcomer to the field, Horizons Titanium Company, is taking a somewhat different approach. Abandoning the Kroll method entirely, Horizons is using a brand new electrolytic process of its own which company officials believe may be the way to cut down costs to manageable levels.

Horizons Titanium Company is

itself a result of what might be called typical, mid-century American economic factors. One of its parents is Horizons Inc., a Cleveland concern that devotes itself to scientific research for industry. We have seen the growth of many such firms, engaged solely in industrial problem-solving, during and since World War II. Horizons Incorporated had a laboratory-sized titanium project in operation when it came to the attention of another Cleveland company, Ferro Corporation.

Ferro had for years been a leading manufacturer of frit, the basic raw material of porcelain enamel used for stoves, refrigerators and similar products. During World War II, the company worked closely with the Army's Chemical Warfare service and became involved in efforts to use powdered titanium as a trigger in explosive devices. Some of the company's research men thus came into contact with the new metal for the first time.

Then the war ended and Ferro went back to producing frit. The boom in home appliances called for plenty of porcelain enamel. But top management men wanted to diversify Ferro's line. Diversification began in earnest in 1950 when Ferro started to buy up small concerns and increase the variety of its products.

During this process of growth

through diversification, Ferro heard about the work in titanium of its neighbor, Horizons. Its own experience with powdered metals, which could very well include titanium, plus its introduction to the new metal during the war helped lay the groundwork for a joint venture with Horizons—which was called Horizons Titanium Company.

AIRCRAFT and other defense needs now take about 90 percent of titanium output. Recently, Rem-Cru Titanium Co. began advertising titanium for nondefense uses. This company—owned by Du Pont's Remington Arms Co., Inc. and the Crucible Steel Co. of America—envisions uses for titanium in chemical production, petroleum, paper and pulp and for vats and ducts in food processing. Rem-Cru figures that noncorrosion is the most important commercial property of the metal at this time.

If that is the case, then titanium can become an important rival of stainless steel. Steel-makers seem to agree on that, and many are entering the field. Besides Allegheny-Ludlum and Crucible, there are Sharon Steel Corp., Republic Steel Corp. and Superior Tube Co. Trade talk has it that United States Steel Corp. is planning a thirty-million-dollar plant

near Boise, Idaho. Altogether, private industry has already laid out or committed itself financially to about two-hundred million dollars for titanium development, more than twice the investment by the Government.

CAN anyone really tell the peacetime future of titanium? Some producers see it as replacing stainless steel in many instances. They muse about its use in automation, and particularly in continuous-flow chemical, oil refining and food processing plants that would require almost no replacement of ducts, containers and valves.

Other titanium producers believe the prime value of the metal lies in its strength and lightness and see the aluminum market as the one they ought to concentrate on.

When the first commercial Douglas DC-7 airliner left the ground two years ago, it carried into service the first important civilian use of titanium—in its engine housings. What happens next depends upon the ingenuity of American research and enterprise. "Don't worry," says one spokesman, "a dollar a pound figure may sound mythical now. But we'll get there one way or another. And then you'll really see titanium move in." ■

*Consumer credit has reached a level of normalcy,
promising to maintain its impetus on mass consumption
—but without inflationary after-effects*

NEW PHASE IN INSTALLMENT BUYING

A REVIEW of the past year makes apparent the fact that one of the most popular family customs in America—that of buying on time—has undergone a transformation. The trend in installment buying had its most rapid rise after World War II, when a hungry public went into a mad scramble to buy up automobiles, appliances, homes and furnishings as rapidly as they could be supplied. Today, the rush is over.

People are incurring new debts only at the same rate that they are paying off old ones. A slight pickup in the number of installment contracts during the past three months has not been strong enough to change this leveling-off process. And it is taking increasingly honeyed terms of credit to attract new borrowers. This change promises to have important effects which hold great interest to producers and consumers alike.

During the past three decades,

the practice of installment buying became a drive shaft of our consumer economy. It was a major force in the development of the mass production-mass consumption combination which is the wonder of the world.

Especially since the end of World War II, consumer credit has been both the cause and effect of other key economic developments: the rise in average income, the exodus into the suburbs, rural electrification and the maintenance of the high rate of employment, to name just a few. It has made possible much buying that otherwise would not have taken place. Installment credit in recent years has entered into three out of every five purchases of automobiles and major household appliances.

During its short history, installment credit has shown a tendency to expand rapidly when left uncontrolled and when a combination of economic circumstances finds the production facilities of

the country in full swing. In such periods of expansion, consumer credit has jarred the money supply and price structure of the nation—at times, very alarmingly. Such unusual additions to the amount of “promised” money on the books has been a contributing force to the development of inflation. The clamping down of governmental controls during periods of national emergency—when there is a danger of shortage in consumer goods—has helped to keep inflationary bubbles from getting beyond control. Most recently, we have seen the almost complete elimination of such governmental controls on consumer credit so that a possible stimulant might be brought into action to the benefit of our manufacturing industries, which have experienced a slowdown.

BUT IF the use of installment credit has failed to keep up with the pace of its past history, what will become of its stimulative powers? What will be the effect on general economic conditions?

Actually, there has not been a decline in the use of installment credit at all. Rather, there has been a return to normalcy in its rate of growth. The boom phase

The editors of **CHALLENGE** prepared this article with a firsthand appreciation of the importance of installment buying to the economy.

of installment buying was a part of that fantastic period which saw the American economy not only fulfilling, after 1945, the needs of a postwar consumer-goods-hungry public, but also increasing twofold its gross national product. Billions of dollars of goods were produced and consumed, made available and bought, and consumer credit played the major role in terms of the dollar volume involved.

There was a slight pause in the expansion of consumer credit when governmental controls were applied to stave off the buying scare during the Korean crisis in the summer of 1950. With the lifting of these controls in 1952, installment buying picked up where it had left off and reached a historic rate of 26.5 billion dollars in March 1953. At this point, installment obligations of consumers amounted to nearly 11 percent of their annual income.

The business readjustment of 1953-54 was at the same time, a cause and an effect of the decline in the use of installment credit. With no governmental controls in force, people began to back away from new installment contracts. To a certain extent, the durable goods market was surfeited. The postwar shortages had been filled. At the same time, the fear of a general economic slowdown caused people to think twice before getting involved with any further

heavy financial responsibilities. During the spring of 1954, when a seasonal surge in car buying should have taken place, there was a 25 percent decrease in the use of credit for automobiles as compared with the same period for the previous year. Sales of automobiles fell off accordingly and backed up dealers' supplies all the way to the manufacturers' shipping points.

NOW THAT the postwar boom in installment buying is over, what happens next? For the time being, retailers in durable goods, particularly, will be hurt. But there is a deep running trend in this country based on the rise of output per man hour and steady increases in average income and living standards. This means that in the years ahead we should be expending proportionately less on day-to-day requirements and more on "big ticket" durable goods. Manufacturers of automobiles and appliances are banking on this. Their hectic pace of research will certainly produce plenty of new products and improvements in old ones to tempt the consumers in-

creasingly. Most sales of such products will involve installment credit which, over the long span, will keep pace with the rise in total consumer spending. We shall continue to use and enjoy and worry about purchases while still paying for them.

WILL THERE BE a recurrence of inflationary pressures because of installment buying?

There are no signs that banks and credit agencies want to step up the use of consumer credit by such means as stretching out periods of payment. In view of this caution, and barring new interruptions in the flow of automobiles, appliances and household goods, it seems probable that any period of rapid expansion in the use of installment credit will be a brief one and will be followed by a quick retrenchment on the part of consumers themselves.

Across the national economy, therefore, we see installment buying as a continuing force in the mass production and mass consumption process, but a gradually declining force as an inflationary force in the monetary system. ■

Shooting Keys

TWO FRIENDS in Czechoslovakia met on the street. One asked the other: "Where are you working now?" "I'm in the typewriter division in Zbrojovka," replied the other, "but I'm not happy. You can't imagine what happened. For a whole month I've been taking home parts, a piece at a time, so I could build my own typewriter. I've already tried three times to make one. And would you believe it? Each time I get a machine gun."—*News From Behind The Iron Curtain.*

*Old King Cotton is working up
a new bagful of tricks to
stave off the inroads of
the "miracle fibers"*

Cotton Dethroned?

by Arthur W. Hepner

ALTHOUGH the advancing arts of spinning and weaving have made available the use of a wide variety of animal and vegetable fibers, cotton has persistently maintained the pre-eminence it first acquired during the ancient civilizations of the Nile valley.

When Eli Whitney invented the cotton gin 150 years ago, he provided the technological base upon which cotton could sit as king among all fibers useful to modern man. This is still true, in spite of the current onrush of synthetic fibers such as Nylon, Orlon and Acrilan, which have cut into the demand even for such a venerable standby as wool. But there seems no end to the man-inspired ingenuity which imparts to the synthetics special qualities even Mother Nature apparently overlooked.

Thus, the millions of people

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employed in the cotton industry, in one capacity or another, find themselves like the Alpine folk who see with each advancing autumn day another several hundred feet of their valley blanketed by approaching winter snows. Today it is wool that is threatened. Will it be cotton tomorrow?

The cotton converters, for one, are doing something about making their product more versatile. M. W. Thomas Co. and Herbert Meyer, Inc., both of New York City, are producing handsome homespun cotton tweeds, tighter weaves and neater finishes that enable cotton to serve for practical apparel all-year-round.

The effort is to add something new to cotton, to give the fiber additional qualities and thereby acquire wider uses. This is one facet of the cotton industry's program. The other is to increase production efficiency and thereby lower the price.

The latest achievement in cot-



ton research was announced last October. The Institute of Textile Technology, working with the American Cyanamid Corp. and the Monsanto Chemical Co., has developed what it calls *Azoton*. Cotton *Azoton* resists heat, abrasion, rotting and stains caused by chemicals and dyes—all of which opens up scores of new possibilities. *Azoton* is expected to go into everything from awnings to toweling, from fishnets to work clothes.

The United States Department of Agriculture maintains a unit located in New Orleans called the Southern Regional Research Laboratory. Constant research is underway to increase the utility of cotton. Farmers and manufacturers are regularly informed about new ways to use cotton and cottonseed. The use of cottonseed oil in oleomargarine is a result of the work done at the Southern Regional Research Labs.

But the bulk of the effort to keep cotton king comes from the cotton industry itself. As early as 1938, the growers, processors, manufacturers and merchants of cotton thought they saw the handwriting on the wall. Rayon was the big villain then. Besides, the entire industry had been demoralized since the crash of '29, and in 1938 a paltry seven million bales of cotton represented a quantity too large for the market to absorb.

Warehouses and fields held another eleven million useless bales. Cotton was selling at five cents per pound.

THERE was no apparent solution to the sagging state of cotton, so in June 1938 the National Cotton Council of America was formed as an industry-wide effort to come up with some answers. The organization came about in response to a call sent out by Oscar Johnston, head of the giant 38,000-acre Delta and Pineland Co., one of the largest cotton plantations in the world. Since that time, the NCCA has grown into an organization with an annual operating budget of two million dollars. The money is used to "organize, modernize and to promote."

Most of the large manufacturing concerns now maintain their own research laboratories. A few years ago, the chemists of Joseph Bancroft and Sons of Wilmington, Del., introduced an improved resinous process which led to the line of "Everglaze" household fabrics. The process is now being used for cotton clothing fabric. More than 150 finishing plants employ resinous applications to make cotton cloth wrinkle resistant and capable of repelling water, flame and dirt.

Because of such processes, cotton suits and dresses which hold their shape are being turned out

in increasing quantities. With the recent trend toward lighter clothing, processed cotton cloth is replacing wool in many staple garments.

Actually, research has become so important to cotton men that the ups and downs of prices no longer constitute the main topic of conversation in their private sanctums such as the Arkwright Club in downtown Manhattan or in the offices along Front Street in Memphis. Shop talk centers about formaldehyde, urea and melamine, the chemical sinews of the synthetic resinous finishes.

Improvement in production techniques is no less important than the work going on in the research labs. Improved machinery helps to lower costs and often opens new vistas to raw materials. The Cobble Bros. of Chattanooga, manufacturers of textile machinery, developed a unit which could weave fabric twenty times faster than looms currently in use. The accent on greater efficiency also inspired a new machine which produces the broadloom tufting for a brand-new product, the cotton rug.

WHICH WAY the cotton market goes in the next ten years is perhaps most crucial to the cotton farmer. Since price is still a factor in the competition among fibers, production costs on the

farm begin to set a pattern which carries all the way to the retail store. This year at least one-fourth of the cotton crop was harvested mechanically—and with substantial savings over the crops of a few years ago. One farmer in the rich Mississippi Delta explained that mechanization had cut his costs from a previous \$50 per bale to a current \$12. He was able to trim his man-hours from 130 to thirty-one.

The research staff of the National Cotton Council has successfully promoted the idea among millers of flour, and feed and fertilizer suppliers, to package their products in cotton print bags. The idea has caught on among farmers' wives, who use the cotton print fabric from the bags for dresses, curtains and other household items. In one year's time, as an outgrowth of this promotional idea, orders for cotton cloth from fertilizer manufacturers have more than doubled.

But synthetics present a constant nightmare to cotton men. The number of test-tube fibers has more than doubled between 1950 and 1953, the very years when the cotton industry put on its greatest efforts to improve its position. Ironically, synthetic fibers have made their greatest gains at the expense of another synthetic, rayon. Many of the leading rayon houses along New

York's textile row have introduced the new cotton lines to supplement their rayon products.

A major setback for cotton came in the industrial field. The tougher synthetics have replaced it as tire cord; and the paper and burlap manufacturers, except for the bag fashion campaign, have swung over to synthetics and pushed cotton out of the bag market. And while for a time the use of cotton in rugs provided new opportunities for expansion, the inability to resist soiling and to cleanse easily has encouraged the use of synthetics in this rapidly growing field.

Finally, notwithstanding all the production improvements, the price of raw cotton is still too high to meet the growing competition from the synthetics. Like practically all major farm commodities, cotton must be subsidized to help the farmer keep his head above water. As a subsidized commodity, therefore, cotton sells for about thirty-three cents per pound on the farm. Without price support, the selling price would drop to twenty or twenty-five cents. Thus, from its very point of origin, cotton is embroiled in basic economic problems besetting the entire agricultural setup of this country. It is at a defin-

ite disadvantage when compared against the synthetics, which pour forth from the laboratories and plants of the most efficient, the most highly capitalized industries in the world.

STILL, King Cotton is not likely to go a-begging for sometime yet. Cotton makes up seven out of every ten pounds of textiles used in the United States today. How long this will last no one knows. To the 494,000 men and women in the cotton mills who work with machinery which can be readily adapted for other fibers, the ability of cotton to survive is not as vital, in the last analysis, as it is to the millions on the one-crop cotton farms. Ironically, the greatest efforts to save cotton are being expended off the farm—among the converters, finishers and other segments of the vast textile industry accustomed to working with traditional cotton. The one person who is sure to profit no matter what happens is the consumer.

If King Cotton holds his own, it will be because of an extraordinary display of ingenuity and adaptability, the trade-mark of accommodation to progress. If King Cotton is dethroned, he intends to go down fighting. ■

1 1 1

THE TOWN COUNCIL of Bickendorf, Germany, recently put a tax of \$2.10 on every house with a bathroom—none of the council members owns one.

American businessmen were "running scared," until they learned that good public relations is a two-way street between the people inside and outside the corporate enterprise

Industry's Public Relations Comes of Age by Albert L. Ayars

ONE OF MY favorite childhood stories concerns a grotesque ogre whose very presence terrifies the countryside for miles around. Of the many thousands of people living within a few-mile radius of the monster, only one small boy has the courage to approach the creature and engage him in a game of tiddly-winks. As the game progresses and understanding and friendship develop between the two, the giant becomes less and less frightening, and smaller and smaller, until finally he is no bigger than the young boy.

The position of business and industry in America has undergone a comparable, though somewhat less spectacular, evolution in the minds of many people. Once looked upon as grasping giants, many corporations have now assumed the role of helpful partners seeking self-progress through promoting the general good.

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This evolution didn't "just happen." Business leaders adopted carefully conceived programs, based on sound public relations principles, to build and maintain public good will and thus assure the survival of the free competitive enterprise system which has been instrumental in establishing for Americans the world's highest living standard.

THE frontiers of industrial public relations thinking have greatly advanced in the last few years. Concern with immediate self-interest is being replaced by a concern for the general welfare. In-



dustry's regard for the national well-being is rooted in the recognition that business, the community and the industrial employee have many objectives in common. Our economy can achieve even greater miracles—but only with the consent and support of the public. This necessitates good judgment and human consideration on the part of industry and, just as important, understanding, enlightenment and economic security on the part of the citizenry. It implies the need for wider ownership and mass investments in stock to keep corporations healthy. By serving the general public, industry serves its own interests without incurring devastating public censure. This type of motivation is often referred to as "enlightened self-interest." The public relations counselor has helped to nurture this philosophy and develop public awareness of its results.

But the realization on the part of industry is only now coming of age. As business and industry grew bigger and stronger near the turn of the century, managements became divorced from their employees and the community in general. Many industrialists were not aware that their treatment of labor, for example, had important public consequences. Employee and industrial relations as a part of public relations had not yet

come into focus. Public relations had received little attention on the executive level.

AFTER the crash of '29, the picture changed. Business no longer held its psychologically advantageous position. The businessman had lost considerable prestige, and with his lowered status he felt the sting of what he thought to be public hostility. He feared an increasing socialistic philosophy. He decided that he must somehow justify his reason for being.

In an attempt to state his case to the public, the industrialist at first utilized the only tools he knew, the selling method he used in merchandising his products and services. Reams of advertising copy, spot radio announcements, speeches, pamphlets, comic books and motion picture scripts poured forth. The advantages of the free enterprise system, the efficiency of business management and the contributions of business to our comfort and happiness were stressed. Convinced that upon his message hinged the life of the economic system, the businessman deluged librarians, teachers, ministers, editors and political leaders with this material. The substantial resistance he met was enough to demonstrate that he could not successfully "sell" ideas in the same manner as he had sold products and services.

But the demand for stating his case increased. The size and expansion of industry had made the possibility of working behind closed doors a thing of the past. As industry grew, its effect on the national scene became increasingly clear. The use of raw materials was tied in with national and individual security; the reserves of minerals, oil and timber, and the development of water power became a matter of public concern. Careless waste of resources would be detrimental to the entire nation. Industrial efficiency became important to the man on the street, for it influenced the price and quality of the goods his dollar bought. The importance of securing and maintaining public support multiplied with increasing government controls and the emergence of organized labor as a vast new power.

Workingmen were convinced that they had a stake in business and industry. A profound revolution in thinking led people to realize that since the products of industry were important to them, the men who made those products were equally important.

FACED with this immense task, the business leader sought the advice of public relations counselors. Together they might have reasoned somewhat like this:

How does an individual become

understood, liked, trusted and respected by his associates? Individuals who have achieved this status are frank and honest. They take good care of their families but are also interested in promoting the common good. In short, they are good citizens and good neighbors.

The corner grocer may establish successful public relations through a combination of thoughtful service, natural aptitude—and a little luck. It is not that simple for a large corporation; the reputation of the large firm beyond the limits of the individual plant community is of vital importance. It is not enough that it live right. It is necessary that people be informed that it does. Success on this level results from expert understanding of public relations problems and a program based on careful planning.

MANY important leaders in industry have become aware that good will and prestige can be earned only through sound policies and conduct in line with the public interest. They realize that the power of final decision rests with the people. These business leaders agree that industry's justification for existence is that it serves society well. Their sense of public and social responsibility has deepened. A large manufacturing company, for example, recog-

nizing the need for a hospital in the community, donated half the cost of a modern hospital and spearheaded the drive to raise the rest. Another company lent its public relations director to organize the local Community Chest drive. Numerous companies have led campaigns for tax levies to build playgrounds, schools and libraries—even when they themselves would have to pay the largest percentage of the tax.

Behind many such programs is the belief that if a business serves its customers well and operates with integrity, it has every justification, as does a farmer or cab driver, to take its right to exist for granted. It thus becomes unnecessary for business to argue its virtues before the public. Rather it can rely on the fair judgment of an enlightened public.

MANY industrialists, instead of attempting to persuade, now choose merely to make the facts of their operations and practices available to the public. High pressure techniques are discarded. The key words of this approach are frankness and service.

The relationship some businesses have established with the schools can serve as an example. In the past, teachers were sent "packaged" materials proclaiming the justice and fairness of industry's point of view. Today the

doors of factories, shops and offices are open for teachers to see for themselves. Teachers are invited with their pupils to investigate all aspects of the business operation. Materials for school use are produced with the advice of teachers, and they contain the factual data needed by the pupils in their studies. These industrialists no longer plan *for* the schools but *with* them. Information for ministers, librarians, editors, businessmen and other community leaders is provided on much the same basis. Enlightened business leaders have become aware of the gains to their communities and to their businesses from assisting schools to do a better job.

THE concept of community service guides the activities of corporation personnel in areas other than education. Campaigns for better streets, hospitals, libraries, water systems, parks, civic auditoriums, research centers and churches often find strong leadership and support among industrial executives and employees. As corporation personnel have entered into such activities, they have become known in their communities. Their neighbors have observed that they don't have horns.

It is obvious that the type of public relations described here involves much more than press relations or publicity. Public relations

objectives are only partially achieved through the dissemination of information; it is a two-way street. Securing information as to the needs and desires of those with whom you work and deal is also part of it.

The effectiveness of a public relations program depends upon top management practices which, in turn, permeate the whole organization. Actually, every function of management has a public relations impact. The public relations of a company are not in the exclusive custody of the public relations department. All echelons of management must be public relations oriented. Decisions regarding sales, production, research, wages, the safety program and the retirement program all become parts of the complete case laid at the bar of public opinion.

The farsighted industrialist has established sound public relations by understanding the importance of every act of every person con-

nected with the company. It is important to carry on such programs because through them business improves itself and renders greater service. It is important, too, to continue them as long as misconceptions in the public mind provide an entrance for those who would overthrow the private enterprise system.

Many objectives of the public relations programs of industry and business are the same as those of farm, labor and service organizations. As a natural outgrowth of our technological development, public relations becomes the means by which various economic groups and interests learn to understand each other. Perhaps the day will come when an even broader concept of public relations will evolve. Then all groups will be willing to join hands in an integrated public relations program to achieve their common purposes and to perpetuate the system upon which they all depend. ■



Conversation That Paid Off

WHEN MEMPHIS cab driver E. T. Gabbert picked up a passenger for the Taystee Bakery, he was reminded of an incident thirty years before when he had worked for the firm. "They had me on the wrapping machine," he reminisced. "It was the hottest place in the world and after six hours I sneaked out a washroom window and never did go back—not even to collect my pay." A few days later cabbie Gabbert received a check from the bakery. The check, including the amount owed him and semi-annual compound interest for thirty years, came to \$50. His passenger had been D. W. Elliot, vice president of the bakery.

The Agricultural Adjustment Act of 1954 goes into effect January 1, but the issues implicit in the law are larger than the mere question of high consumer prices and low farm income

AGRICULTURE: A PAINFUL REAPPRAISAL

WITH THE Congressional elections of 1954 having passed into history, one of the chief issues of the political campaign will again, within a few weeks, come to the fore of public attention. On January 1, the new law which was designed to alleviate the nation's "farm problem," the Agricultural Adjustment Act of 1954, goes into effect for the first time. Of all the issues of the recent elections, it is one of those most to be counted on for prominent and continuing debate. Evidently, most of the nation's farmers have decided to wait and see what the Republican farm legislation will do for them.

To a visitor from abroad who observes our agricultural situation from the surface—consumers loaded down with packages of food purchased from well-stocked supermarkets, the long ribbons of highways passing fertile acres and freshly painted barns—the existence of a farm problem would not be obvious.

But the food grower in this

country who keeps up with his Hog World or Farm Journal could point out that as a group farmers today have the lowest purchasing power since 1941. Many of them would assert that farmers have taken a deeper cut in income than that suffered by any other class of businessmen or workers as a result of the economic downturn of the past year.

The unprocessed commodities which farmers produce have sustained the earliest and deepest price reductions. To farmers in general, the biggest part of the farm problem is the way prices drop on farm commodities while the prices of most of the things farmers buy stay constant or rise. This condition has a long history.

Nonfarmers viewing the farm problem believe that the prices of food and other agricultural commodities have been too high since World War II. They disapprove in general of the way things have been going in the farm price-support program.

An inevitable complaint has to

do with cost. In the single fiscal year of 1953-54, the Federal Government extended a new high of two billion dollars to support the prices of agricultural commodities, either through outright purchase, loans or other means. The Government expects to lose about one-fifth of this investment.

The loss, or cost, incurred by supporting farm prices arises partly from the storage problem. The Commodity Credit Corporation now spends an estimated \$700,000 daily for the storage of surplus crops. The loss also represents the difference between the amounts paid for commodities when they are bought outright from the farmers, and the amounts for which they are sold.

HUGE supplies of surplus commodities have been mounting because of the lack of demand at open-market prices. At present, the Government has in storage a full-year supply of wheat and of cotton. It holds claim to the contents of thousands of sealed corn cribs. The Commodity Credit Corporation has been holding so much excess butter that for months it has been touch-and-go as to

whether enough pounds could be sold in dribs and drabs to make room in the warehouses for new purchases the agency is committed to make. The butter production of next spring is viewed with foreboding.

The new Agricultural Adjustment Act of 1954 continues farm price supports, but its similarity to the previous program ends there. It calls for a shift from a fixed to a flexible percentage of parity. In theory, parity is an index of purchasing power, representing what farmers could buy in return for their output during the prosperous base period of 1910-14.

Unless the Democrats revise the 1954 law during the next session (and there are some indications that they might), farm prices will be supported at between 82 and 90 percent of parity. In recent years, farm price supports for most products had been fixed at 90 percent of the purchasing power during the base period.

The adoption of the new Agricultural Adjustment Act was no simple stroke of legislation. After the House finished wrangling, the Senate required six days of debate and 24 continuous hours of voting on amendments before the law could be passed. Will it be successful? What new issues does it raise?

Farmers have been getting less of a return for their work. The

CHALLENGE presents this staff-written article with the conviction that as long as the present structure of our agricultural economy remains unchanged, it can be maintained only at the price of subsidy.

average of all farm prices has slipped from 113 percent early in 1951 to somewhat less than 90 percent of parity at the latest count. To some, this indicates a failure of the old program to serve the needs of the farmer.

In the minds of many farmers and farm spokesmen, however, recent price reductions have not disproved the practicality of fixed price supports, at least under present circumstances. They claim that if the old program had not been in effect, the prices for their products would have dropped much more than they have.

HOWEVER, it might be said that the major argument in favor of a fixed parity is less economic than sociological in character. Generally speaking, those who believe in a high, fixed parity also believe that rigid price supports are necessary for the survival of the traditional, small family farmer. Most of them fear that the new Agricultural Adjustment Act will work against the interest of small farmers, driving many of them off their holdings at a tremendous social cost.

Those in favor of the new law, with its provisions for a flexible parity, have predicted that it will lower retail prices, increase demand and thus eventually bring about a hike in farmers' incomes. They believe also that it will con-

tinue to help to prevent severe fluctuations of farm prices from year to year, and do this just as well as the old system did.

Behind the attitudes of the men most active in agricultural policy-making today lies experience with a turbulent series of events.

THROUGHOUT the history of the nation, prior to the twenties, all of the emphasis of agricultural policy had been on increasing the number of farmers, extending cultivation of the land and encouraging mechanization to step up production. Demand rose steadily at home and abroad, with surpluses of farm products going for export in payment of loans that were helping to build up the country industrially. The campaign to produce more was intensified during World War I. Neither farmers nor the nation at large (How are you goin' to keep 'em down on the farm?) were prepared for what followed.

With wartime demand shut off, farm prices plunged. With farmers staggering under a load of debt incurred mainly by expansion of land holdings, agriculture settled into a long slump. Poverty-stricken families by the thousands drifted off to the cities to take jobs in fast-growing industries.

In an effort to give agriculture a shot in the arm during the twenties, the Government increas-

ed research into soils, insect and disease control and the like, and encouraged farmers' cooperative marketing schemes. These measures, along with mechanization, increased farm productivity—even while the number of farmers was decreasing.

Loans were extended to other countries to finance purchases of American farm commodities. Higher agricultural tariffs were posted to fend off competition from abroad.

Left unaffected were two changes brought about by World War I: we had switched from a debtor to a creditor nation and no longer needed farm exports to pay off the national debt; and other nations, particularly Canada, Australia and Argentina, had expanded their farm output and were offering sharp competition in the world markets. The steps which led to increased productivity did nothing to increase home demand. The population was not growing fast enough to absorb the extra output at prices that were advantageous to farmers.

FOR nearly twenty years, between the two World Wars, farm productivity rose steadily, and farm prices just as steadily failed to climb sufficiently to afford farmers in general an adequate income.

The sufferings of the early thirties (farmers warding off

would-be mortgage foreclosures with shotguns), resulted in legislation which some thought was long delayed. For the most part, such legislation took the form of restrictions on production by making direct payments as a reward for limiting acreage.

In 1936, the Commodity Credit Corporation initiated the practice whereby farmers take out loans against the portion of their crops which they want to store to sell another day. This helped trim the tops and bottoms from the fluctuations in prices. But overproduction hung on.

THEN CAME another war. Price supports were offered specifically *to encourage* the output of needed crops, guaranteeing production costs plus a considerable profit. Sparked by patriotism as well as price inducements, farmers increased production by nearly one-third. Following the war, prices on farm products continued high for several years. This resulted from the quick surge of peacetime economic activity, from the rise in population, the needs of foreign aid and the farmers' own political agitation.

Not until 1948 did demand begin to fall short of supply. With price supports still in force, the amount of commodities the Government was obliged to acquire rose sharply, and so did the cost.

Surpluses began to get unwieldy.

The Korean war provided a temporary respite. (What a disastrous thing it is in human affairs that economic livelihood can be uneconomically furthered by a war.) The fighting absorbed all surplus stocks, gave rise to new appeals for higher farm output and returned fixed parity price supports to the good standing from which they had slipped. But within two years, farmers found themselves in the same old squeeze.

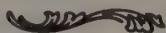
From out of this background, we can see the conflict between the forces of technology and those of social tradition, as indeed we may in almost every great segment of our modern economy. In the case of agriculture, this conflict perhaps holds more jarring possibilities than in most others.

ACCORDING to the recently published *World Population and Production*, by W. S. and E. S. Woytinsky, experts have estimated that the United States could increase its agricultural output sufficiently in a decade to provide food, at present standards, for 380 million people.

Even with such possible achievements not spelled out as a spur,

the technological drive in agriculture would be irresistible. Moreover, it may be expected that as the flexible parity requirements of the new farm law go into effect, farm prices will decline somewhat, at least for a time. If this happens, an additional premium will be put upon the attainment of lower cost per man-hour, through further emphasis on technology. Allowing for such expectations, this may be an inducement to bring about increased pressure to extend the size of individually held farm holdings and to displace more and more individual holders. The simple truth is that there are too many farm families.

If the drive toward further mechanization is increasing, inevitably, while demand grows but slowly, how is the transfer of land from hundreds of thousands of farm families, who would like to keep on being farm families, to be handled? How is their adjustments to new economic and social settings to be eased? These, even more than the questions of prices for consumers or immediate returns to farmers, are the issues implicit in the agricultural law which becomes effective on the first day of the new year. ■



A second look at the "boom" north of the border reveals a curious overdevelopment of industries which cannot be supported by a faltering domestic market

Double-Take on Canada

by Frank A. Tinker

SINCE World War II, the words *boom* and *Canada* have almost become synonymous in the public mind. To suggest that a return to a more reasonable economy may be imminent, has, until recently, been akin to heresy, especially in Canadian political circles. Today the heresy is rapidly becoming reality.

The Canadian boom was the result of a variety of factors: the backlog in consumer demand created by the war; the savage depletion of natural resources in other countries; the accompanying discoveries of, and investment in, these industrial materials in Canada; the creation of an industrial machine to meet the extraordinary demands; and the resultant population shifts.

The finishing touches are now being put to the job of creating an

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industrial entity out of what was once a conservative, agricultural economy. Much of the prosperity of Canada's citizens, which has not been as outstanding as the over-all picture suggests, is due to these artificial stimuli.

Today the factors which spurred the Canadian build-up no longer operate. Wartime scarcities have been eliminated. Industrial production in devastated countries has risen; recovery from war has filled the domestic gaps and has invaded those fields which previously were open only to the more fortunate, unscarred economies—like Canada's. The Korean and other Asian wars have been settled.

Canada is faced with the rude shock of living with what it has built. The hard fact is that she is

no longer an expanding country, the peak having been reached unnoticed sometime during the past year. One of the major difficulties is an insufficient domestic market to sustain the kind of industrial entity which the Canadian grand planners have undertaken. At the same time, the price of force-feeding this deliberate industrial growth has been a high-cost economy, which makes the development of foreign markets difficult.

A relatively thin strip of arable, settled land stretched along the northern border of the United States houses the loosely packed fifteen million inhabitants. Not only is the population inadequate as a domestic market, but it is doubtful that the fifty million forecast for her population will be reached in the foreseeable future. Notwithstanding the propaganda campaign abroad to induce migration to Canada, only 170,000 immigrants a year have responded. Of this total, many have already returned to their homes abroad. In addition, 50,000 Canadians, among them the graduates of professional and industrial colleges, emigrate yearly to the United States, cutting the actual growth still further. With any increase in unemployment, this exodus becomes painfully more pronounced.

THE agricultural population is affected even more severely. Partly

because of reduced profits, partly because they have been encouraged to leave the farm for industrial jobs, the population of Canada has flocked to the cities. In spite of immigration, much of the good farmland, which is not abundant, has been abandoned. There is more lying fallow now than before the immigration began. Of the immigrants who came, one out of every two went immediately to the industrial area of southern Ontario or to other nonfarm jobs in Quebec.

Concentrated in industrial sections, with much of its labor unskilled, Canada's population is increasingly sensitive to economic fluctuations. Any large-scale revision of national policies, such as now appears mandatory, would have a quick and unfavorable effect upon living standards among these laboring groups. As a result, the mild recession that was suffered in the United States will not be as easily weathered by the Canadian economy. At the present time, most signs point to a continuing sharp decline as the winter sets in, despite the government-sponsored boost given by the St. Lawrence Seaway project, the pipeline from Alberta to Ontario industrial centers and an expanded public works program.

The high-cost Canadian economy, a product of an artificially built industrialization, results in

production and living costs considerably higher than those of the United States, who, incidentally, is the purchaser of 61 percent of Canada's exports. These higher costs prevail despite the fact that Canadian labor in the manufacturing industries is paid on the average of one-fourth to one-fifth lower wages than its American counterpart. The inevitable result has been a rise in the prices of Canadian goods, both in the domestic and foreign markets, to the extent that Canada is falling out of competition abroad and requiring increasing protection for her industries through high tariffs.

A LARGE part of the difficulty lies in the tax program. The sound fiscal government of which Canadians have heard so much has been bought at the cost of assessments which a United States resident would consider outrageous and under which industry would suffer. The solvency of the government may be little solace to the Canadian who finds himself unemployed today partly because of it. This is not to say that a solvent government is bad. But a high-cost government which insists upon being supported through high taxes can be discouraging to say the least.

As a result of excessive costs and excises, clothing manufacturers say they can offer equivalent

garments in New York at an average saving of 87 cents each over the Canadian product. The Canadian textile industry, despite its previous objection to American "restrictive" import duties, is now demanding a 50 percent increase in tariffs to stave off collapse.

An automobile which would cost \$1,800 in the United States bears a 20 percent excise and 10 percent federal sales tax in Canada, which raises the price there to more than \$2,340. Yet the worker making this automobile in Windsor receives less for his labor than the comparable stateside employee. With the same situation prevailing in housing and rents, practically all of the income of a family goes into living costs. Little is left to use as a cushion in times of stress and recession, such as is developing now.

Even Canada's raw material markets which do not lie in the protected domestic domain are in jeopardy. The rising price of Canadian paper goods encouraged the producers of fine paper in the United States to seek out and develop the fast-growing Southern pine sources. The possibility is now near that newsprint will be manufactured from hardwood by a new process in the American Northwest and Midwest. If the United States can turn to its own large supplies of unused hardwood and utilize more efficient methods,

Canada will suffer a severe reduction in its largest export item.

Once the chief source of certain foodstuffs for the British Empire, Canada practically has been eliminated from competition by lower prices on these goods from other parts of the world. Even by subsidizing farms, she has been unable to match prices on cheese, butter, meat and fruits. (This partly explains why agricultural labor flocks to the cities.)

The 1954 Canadian farm income is 7.5 percent below the '53 level, and 1953 itself had suffered a 25 percent decline from 1952.

PARALLELING this sad development has been the drop in foreign trade. Canada's adverse balance for the 1954 half-year is almost equal to the entire previous year's deficit. It is difficult to see how this trend can be reversed without a drastic lowering of Canadian production costs and/or living standards. If they are not reduced, however, the consequences may well be more severe than any voluntary belt-tightening which could be undertaken.

Even the policy of provincial governments has been to encourage rampant industrialization at the expense of almost every other part of the economy. In Ontario, for example, a reduction in the export of pulpwood was ordered. The result: high production costs

discouraged new domestic mills, the United States increased its own pulpwood production and bought more from other sources, and the area of Ontario was in danger of becoming a ghost region. The provincial government had to relax the policy.

Even in the resources field, the boom outlook has given way to a more sober view, except in biased political circles, with the result that many of the "fabulous" new areas that were to be developed have been all but abandoned. Uranium City, the subject of many colorful news articles, and claiming a future population of 10,000, is now losing the last of its 700 inhabitants.

Since much of the foreign investment in Canada has come from sources in the United States, questions arise as to the effect of payments eventually exacted. Experts are agreed that the premium of the Canadian dollar over the American is a result of most of the profits of the American investments being plowed back in the industry or enterprise they supported. This is not motivated by unselfishness; it is simply the nature of the investments which are concerned with growth in value and not with earning potential. Because of the lower taxes in both countries in capital gains (Canada, in fact, has no tax on such income) most investors are

interested only in the capital growth of the enterprise. As a result, many Canadian stocks have already risen to unrealistic levels as far as their dividend return is concerned. Several major stocks on the Canadian exchanges now pay no more than 3 percent annually, but due to the demand, the price is rising steadily.

WHEN the inevitable outflowing of American dollars from Canada begins, which could happen with a shortage of capital in the United States or a reversal of tax schemes in either country, it is likely that the premium on the Canadian dollar will not only disappear, but reverse itself. It will be a sad blow to Canadian pride to see its dollar return, if it does, to the 15-20 percent discount of prewar days. It must be admitted, however, that it is a possibility.

Business failures in the first six months of 1954 were 56 percent over the 1953 figure. Liabilities have increased 145 percent. Unemployment is roughly twice what it was last year. Steel ingot production is down 24 percent this year.

Despite these unfavorable developments, there is no panic in Canada. Nor is there cause for one. But it is necessary to reconsider the direction of the nation's economy and to realize that both the actual and potential of Canada have been grossly oversold. What was a temporary boom has been misinterpreted as a permanent trend of the nation's economy. Upon this misinterpretation decisions have been based which will work to the detriment of Canada. It is difficult to see how an "agonizing reappraisal," which is the fate of many nations these days, can be avoided up north. ■



Oil in Peru

ALTHOUGH PERU has only recently attracted California's oil explorers, that country can claim to be the oldest petroleum center in the Western Hemisphere. Long before oil was discovered in the U. S. (some 100 years ago), Peruvian Indians were digging pits near oil seeps to extract the asphaltic tars that had accumulated. They refined the product in open-top clay vessels to get asphalt for surfacing roads and caulking boats.

Europeans and Americans first took an interest in Peru's oil in 1875. International Petroleum Co., Ltd., a Standard Oil Co. of New Jersey affiliate, acquired the Labrea-Parinas field in northern Peru in 1914. The big rush to Peru didn't start, however, until the U. S. Government had modified its import petroleum laws in 1952.

In an era when even large firms must consolidate to remain in a competitive position, what are the prospects for the "little guy"?



Can Small Business Survive?

by Bruce Weaver

IF THE MERGER of America's two major labor organizations materializes, Messrs. Meany and Reuther will have succumbed to a trend which is becoming ever more obvious on the American business scene. The merging of the small into the large, and the large into the largest, has raised serious doubts as to the efficiency and ability of small business to satisfy the demands of the developing American consumer market. Questions concerning the health of small business and its chances for survival are inevitably raised because of the current rush and crush of business mergers and the accompanying speculation about future antitrust action.

The trend toward bigness in our economy is a concern of the Small Business Administration of the

U.S. Department of Commerce. In its latest semiannual report, it states that: "The tide has been running steadily against small business since the end of World War II. . . . the gap between large and small business shows an ever widening margin."

Even a cursory view of the business scene will bear out these conclusions. Half of the businesses formed during the six-year period from 1946 to 1951 were liquidated within two years, according to Commerce Department figures.

The movement to make one large business out of two medium-sized ones, or one giant out of two larger firms, reaches into practically all areas of the business community. Who hasn't heard of the consolidations in the automobile industry

of Kaiser-Frazer and Willys, Nash and Hudson, Studebaker and Packard? But the automobile industry is not unique; there have been mergers in the fields of chemicals, textiles, rubber, shoes, steel and even banking and farming. The fact emerging from the 20th-century-America business scene is that in today's highly competitive markets, it often takes a giant to compete.

At the same time, there is no indication that the Federal Government is frightened by the trend toward big business. While the Justice Department has turned thumbs down on some proposed mergers which might severely limit competition, it has carefully stated, through Attorney General Brownell, that no one should conclude that all amalgamations will be banned. Each merger proposal will be weighed on its own merits. What is more, present antitrust laws may be in for a major overhauling soon. Mr. Brownell has revealed that the Justice Department will seek changes in our antitrust legislation in order to foster a "middle-of-the-road economic and social administration" of the Federal Government's supervision of corporate combinations. While new legislation may somewhat modify the current trend toward bigness, it is un-

Bruce Weaver, research economist, wrote this article on assignment.

likely that it will affect it seriously. The outlook is that small business will have more to contend with in the future.

The United States is still a nation of small businessmen. Ninety-five percent of all U.S. firms have fewer than twenty employees. In such fields as retail trade, services, finance, insurance and real estate, about four-fifths of all firms have fewer than four employees. Even in manufacturing, which by nature gravitates toward bigness, more than two-fifths of all businesses have less than four employees.

Only 1 percent of all business units is comprised of larger firms of more than 100 employees. And the "giants" we frequently refer to, firms of 1,000 employees and more, represent only .01 percent of the business community.

However, this picture tells just part of the story. Despite their relatively insignificant number, big business firms are far more important than small ones in assets, fixed investments, sales, incomes and number of people employed. Sixty percent of all American workers are hired by 1 percent of all businesses. At the other end of the scale, the smallest firms, comprising 75 percent of all firms, employ only 6 percent of our workers. These figures do not include farmers and professionals.

Giant firms afford an even more startling contrast. The puny .01

percent of the business population employs 19 percent of the workers!

The trend toward big business is essentially a direct outgrowth of the technological and mass distribution objectives of our economic system. The highly technical nature of modern production methods; the spread of automation; the growth of massive research programs; the widespread adoption of large-scale employee benefit programs are all expensive. They all require expert and efficient management, and all seem best administered through the medium of the big firm.

PLAYED against the background of this long-term economic factor, four short-term forces have aided the rise of the giant business. Basic to the current plight of small business is the fact that after years of easy picking, competition is back in our land—and some smaller firms cannot take it financially. Immediately following the war, the small firms were able to sail along briskly on the current of pent-up consumer demand, while some of the larger firms were saddled with the problem of reconverting to peacetime production. But once the reconversion was accomplished, the larger firms were able to overtake the smaller ones, particularly in the areas where demand was shrinking.

Now that the postwar backlog

of demand is used up and the Korean emergency has subsided, competition is sharper than ever. This has left the small firms in a vulnerable position. On the other hand, many of the large corporations have not only maintained themselves, but they have advanced. In the drive for research and development, the comparative disadvantage in finances takes on added importance. While the overall tax structure places an equal burden on large and small, the net profit left to a large firm represents sufficient capital (since gross profits were proportionally large) for expansion and reinvestment. This is denied its small companion. As the latest report of the Small Business Administration points out, smaller firms may still have enough working capital to finance current production and sales, but they do not have enough available to finance any substantial growth. Hence, the large concerns more easily forge ahead in the battle for new products, new uses and new markets.

A second trend that has hurt small business is the new diversification in industry. The variety of products now being offered is simultaneously a cause and a by-product of the drive for business integration to strengthen competitive position. But growing diversification of production by larger manufacturers and distributors

means fewer lines remain the exclusive property of small firms.

Poor financial resources are another reason for small business failure. Larger businesses generally share larger liabilities; yet they manage to survive. For example, Dun & Bradstreet, the famous collection agency, relates that businesses with liabilities of less than \$25,000 show many more instances of failure than businesses involving liabilities of more than \$100,000.

In other words, larger firms are in a better position to absorb temporary losses and meet unexpected competition.

Another reason for small business failure is poor management. Many small businessmen, particularly those just entering the world of competition, are somewhat lacking in experience in the fields they enter. According to Dun & Bradstreet, the lack of know-how is responsible for 90 percent of all small business failures. This incompetence extends to managerial and technical efficiency. No business, big or small, would survive under these conditions.

While the lure of being independent and outside the orbit of the larger organizations might be encouragement enough for an enterpriser, he must nevertheless be aware of the problems that today's business community presents.

Where competition is keen, competence will be the keynote to success. This competence is grounded in the technical and managerial know-how of the businessman.

Small business is certainly far from dead. That it is alive and kicking is dramatically demonstrated by the high rate of new business formation during the first eight months of this year. The new incorporations hit a high for the last seven years and exceeded the corresponding period in the boom year of 1953. Such enthusiasm can only be interpreted as an overwhelming vote of confidence in the dynamic nature of small business and in our economy.

As has been amply demonstrated in the past, the competitive drive for technological advance has left room for the enterpriser. As research opens up new frontiers, new opportunities are created for the small firm. The plastics industry, for instance, which developed from large-scale scientific research, has opened up new vistas for many small businesses. The small enterpriser is eager to seize such opportunities.

The small businessman is eager to launch out into the business community. While competition by the giant corporations has made the going rough for the novice, it has opened up a variety of opportunities for the specialized firms

and for the service and trade organizations. The giant corporations, in a desire to maintain themselves, have stimulated market competition among themselves, if not always for price, then for new and better products.

Indeed, the marketplace itself is the final determinant of business success or failure. By relying on the production of larger corporations, consumers and business buyers have shown continuing faith in our competitive system, a system which makes even the large corporation a competitor within itself. This in turn has been responsible partially for our economic growth.

WHETHER small businesses will survive the current decline is largely a question of public policy and the ability of small business to adapt to changing conditions. The

small businessman can, to a large extent, forge ahead if he avails himself of the services that will help him to avoid the serious pitfalls business offers. The Commerce Department statistics point out that the greatest number of failures occur in businesses and industries which have rapid turnovers and sporadic demand, such as in construction, transportation, lumber and apparel. The smallest percentage of new business failure occurs in the more stable industries of finance, foods and printing.

There are many opportunities left for small business, but increasing specialization and competition is the price of success. Today, "going into business for yourself" takes more than a desire to be independent. It takes measured procedures and a professional will to survive. ■



From Home to Factory

MANUFACTURERS working on the thorny problems faced in building today's complex aircraft have discovered that such unrelated things as bathtubs and deep freezers have provided the solutions to some of the puzzles. For example, in one plant where quantities of aluminum—which becomes temperamental when exposed to temperature changes—are used, a huge deep freeze was the simple answer to a vexing problem. After a part has been heated, it is quickly placed in the quick freezer. When it is needed some time later, it is brought out from the freezer in a "soft" condition, making it less brittle and greatly reducing the possibility of breakage.

Another example is the manufacturer who built a bathtub big enough in which to "dunk like a doughnut" the largest airframe part ever built. The tub is filled with a special chemical solution; the part is dipped in it and comes out cleaned and covered with a tough adhesive film that makes the tricky job of painting aluminum a simple task.

The future growth of air transportation depends on an increasing use of new-type planes for short-run freight and passenger service

Short Air-Hops Pay Off

by Marion L. Briggs



THERE IS A new look about the air transport business these days. The emphasis is on short-distance haulage, and the size of the cargo or the distance it is to be carried seems to make very little difference. Those science fiction notions of cities being swarmed about like beehives are beginning to take shape.

The airlines are making a concerted effort to destroy the popular belief that the most feasible use of the airplane is in long-distance hops. Three factors are contributing to a breakdown of this belief: the increasing movement of freight by air, a constantly expanding passenger traffic and the technological development of craft which lend themselves to short-distance hops.

A man vacationing in Nantucket

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this past summer wanted to replace a defective refrigerator part. Quick replacement was obviously a necessity. The part weighed just two pounds. A trucking or railroad service would not have wanted to bother with the item, but a scheduled airline took it gladly. The rate was less than \$4.00 for the haul from New York. Faster delivery and faster turnaround can make shipping by air no more costly than other means of transportation.

Even more startling perhaps is the fact that a short trip in a helicopter for a passenger may be less expensive than taking a taxi. Citing the busy run from New York's La Guardia airport to Newark, New Jersey, a helicopter line's man says: "This trip by taxi takes about two hours through sixteen miles of the most congested urban area in the world, and costs \$12.50. By helicopter it is only 17 minutes and costs \$9.50."

Both the fixed-wing and helicopter lines think their biggest potential with air freight is in carrying radio and television sets, automobile and machine parts, cash registers, drugs, magazines and newspapers, clothing and other "perishable goods." What the public usually thinks of as perishable goods, such as fresh foods and cut flowers, represent only a fraction of the type of air freight that the aviation industry leaders are thinking about.

If a dress selling in a retail market in Dallas, Texas, becomes an extremely "hot item" and fast filling of the re-order is necessary to supply the demand and to keep the sale going, it is entirely feasible that the store can get the dress from New York in time by air.

This extends the concept of pipeline or constant flow delivery to retailing and other distribution fields as distinct from the old system whereby goods and supplies have been moved and deposited in large quantities over long intervals. This is the key feature of changes taking place in transportation generally, expediting distribution throughout the country. It is akin to the assembly line principle in mass production and should eventually have an effect on the scheduling of production itself.

The use of air freight decreases

dependence upon large inventories. The automotive, drug, machine parts and radio and television industries are using air freight now to cut capital expenditures, to save space and to reduce obsolescence.

It is not by sheer accident that the air transport businesses have turned to a greater consideration of air freight. Freight is taking on the economic significance for the airlines that it has had for the railroads—the prime money-maker. Short-distance freight haulage is assuming top importance. If the figures of the country's largest scheduled airline are a guide, the greatest volume of air freight today is in intercity hauls of less than 1,000 miles. There has been an increase of 15 percent in this type of air freight transport during the first half of 1954 over the first half of 1953.

AERICAN AIRLINES states that since it began handling freight in 1945 (when it carried less than two million ton-miles) it has had a steady increase each year, reaching close to fifty-five million ton-miles in 1953.

United Airlines has started offering advance reservations for air freight space on its planes, both passenger-cargo and all-cargo craft, either for a stated flight or a specific delivery date.

There is also a definite trend in

passenger traffic toward an increase of short flights between cities. About twice as many people travel for pleasure as for business, and the average tourist likes a plane trip of only a few hundred miles.

Eastern Airlines, the world's largest air coach operator, affirms: "There is a good likelihood that as North-South traffic builds up during the coming fall and winter season, air coach schedules might well be increased until they represent 50 percent, or even 65 percent, of our total operation."

In the words of an official of another leading scheduled domestic airline: "The transfer to coach service will be the biggest expansion in the next five years in passenger traffic." And some authorities in the field forecast that low-fare travel will account for 75 percent of passenger air traffic in a few years.

The scheduled airlines are going after a share of the 83 percent of the nation's total pleasure traffic which now moves in automobiles. Currently the airlines have 40 percent of the business-travel market but only 14 percent of the country's tourist travel.

OF COURSE, the singlemost important factor responsible for the growing success of both freight and passenger short-haul air traffic is new plane development, in-

cluding the versatile helicopter. Chief interest has turned to new turbojet and turboprop craft which are on the way. Douglas Aircraft's new DC-8 turbojet design is being proposed as a commercial transport, suitable for either short-haul or long-range service. The company also has a commercial turboprop plane, now on the drafting boards, that may go into production ahead of the pure jet craft.

Lockheed is at about the same stage as Douglas in commercial jet plane development. And while Boeing has a 707 turbojet, primarily designed for military use and now undergoing test flights in a commercial model, it is not likely to be brought into scheduled airline service much sooner than competitors' designs.

NEXT SPRING Capital Airlines expects to put into service its new fleet of British-built Viscount turboprops, which, it is believed, because of smooth riding, little vibration and a speed in the vicinity of 400 miles per hour, will best piston-driven planes on short hauls.

The most interesting development of 1953 was that helicopter production hit an all-time high; and it is still rising. Interest in the rotary-wing plane for commercial use was very much stimulated by its successful airlifts of

military passengers and cargo during the Korean war.

Three United States helicopter carriers, subsidized by the Post Office Department and the Civil Aeronautics Board, and operating in New York, Chicago and Los Angeles, are developing the standards of helicopter airlines operations for all aviation. They are forging on with no books to go by.

Leading the way is New York Airways, Inc., which in August 1954 became the first helicopter carrier in the world to fly passengers at night. Incorporated in 1949, it began with mail transportation, later added cargo to this, then in July 1953 opened the world's first passenger helicopter service. By July 1954 it had carried 4,642 passengers while flying 100,000 passenger miles.

A spokesman for this line claims the principal problem now is that helicopter operation costs more than the traffic will bear. He says: "The way to bring down the cost and raise the profit is essentially to have a bigger payload and a bigger volume operation."

New York Airways currently is using a single-engine, seven-to-eight passenger craft, having a cruising speed of 80 miles per hour and built largely to military specifications. "But we expect

within three or four years," says the spokesman, "depending upon military needs and the national and international situation, that a commercial model will be designed to include operational economy in terms of payload, maintenance ease and cost."

WITH all this forward-looking activity already under progress, how is the industry faring financially? According to a recent survey for investors, it "has entered a new era of stability." Prospects for a continued high volume of business, regardless of any recession in the economy, are good. Aircraft stocks are reaching the "blue chip" status, and were described by Barron's this past fall as "the industry group glamour stock for 1954 with increased earnings that have brought a parade of dividend boosts. . . ."

With firm financial roots evidently becoming established, and much less bound up with defense and government than in recent years, the aviation industry is warming up for a new takeoff. Still young and relatively new to the "big time," it will draw primarily from its own energy and resources for the achievements of tomorrow. Our future journey rides with it. ■



The President's chief economic adviser outlines the steps the Government has taken to foster a steadier pace of business activity

Business Fluctuations And the Government

by Arthur F. Burns



A GENERATION or two ago most economists and men of affairs took the business cycle for granted. The prevailing view was that in a free economy such as ours, in which men may buy much or little, work or not work, invest or refrain from investing, embark on new ventures or pursue the path of routine—that in such an economy, some fluctuations in production and employment were bound to occur.

Beyond this, it was widely believed in those days that occasional declines in production served a useful function; first, because they facilitated an adjustment of the volume and structure of production to the state of demand; second, because they impelled working men and business managers to greater efforts and thus served to weed out producers unable to make their way under conditions of

extremely vigorous competition.

These views, which were very common and strongly held a generation ago, have gradually lost their grip on the minds of men. For this there are several reasons. In the first place, experience has taught us that while a lull in activity may tend to stimulate advances in efficiency, dependable workmen lose their jobs along with the shiftless few, once an economic contraction deepens. Well-managed firms, no less than those that are poorly managed, suffer losses and even bankruptcy at such times. It is therefore very doubtful if, on balance, business contractions serve to enhance efficiency.

Experience has taught us that a business depression leads many men to lose faith in themselves, and that it also leads some to lose faith in our economic and political institutions. These dangers to morale are especially great in our

Adapted from a recent address by Dr. Arthur F. Burns, Chairman, Council of Economic Advisers, before the Economic Club of Detroit.

time when international communism is busily engaged in spreading falsehoods about the Western world, exaggerating every weakness in the working of our institutions, and twisting the minds of poorly informed folk by false but alluring promises of a better world.

Most important of all, experience has taught us that, although the Government is by no means omnipotent and while it is capable of making mistakes, it can also pursue policies that not only promise to bring greater stability to economic life, but also to expand the scope and add to the vigor of private enterprise.

TODAY it is no longer a matter of serious controversy whether the Government should play a positive role in helping to maintain a high level of economic activity. What we debate nowadays is not the need for controlling business cycles, but rather the nature of governmental action, its timing, and its extent. Even on these matters we have won greater agreement than seemed likely only a short time ago.

Thus, during the past year, while our economy was undergoing contraction, very few students of affairs seriously urged that taxes be increased to wipe out the public deficit; or that interest rates be raised to speed the liqui-

dation of excessive inventories and of superfluous industrial plants; or that banks call in their loans and reduce the outstanding money supply in order to protect their financial solvency; or that the general public be exhorted to save its money, and postpone buying automobiles, furniture and other things that people like. Yet—incredible though it may now seem—these were precisely the remedies for curing a business recession that had a considerable vogue in earlier times.

I should now like to leave these general remarks and . . . sketch the steps that the Government took with a view to checking the [recent] decline, and conclude by drawing a moral or two that may, perhaps, serve us as a useful guide in the future.

In January 1954, the President presented a comprehensive economic program to the Congress. This program was designed to strengthen incentives and to stimulate enterprise—through a revision of the tax laws, through an enlargement of the credit facilities for housing, through improvements of the highway system, and through a new and realistic agricultural policy. The program was also designed to foster economic stability by extending the protective scope of old age and unemployment insurance, and by giving the President authority to control

the terms on which Federal assistance would be provided for housing loans and mortgages.

Between January and the closing of Congress, which adopted the greater part of the President's economic program, further steps were taken by the Government to ease general credit conditions and to reduce excises and other taxes. Aid was provided to some of our hard-pressed industries—notably to shipbuilding through a new construction program, and to zinc and lead mining as a result of a revised stockpiling program. The Government also attempted to assist localities suffering from unemployment by channeling contracts to them as far as feasible, by boosting the allowable rate of accelerated amortization, and by its job placement service.

This, in very broad outline, is the record of recent governmental action.

THAT THE measures taken by the Government have been reasonably effective is, I think, quite clear.

Current indications are that while economic trends are mixed, business activity as a whole is improving. Construction has been setting new records each month. Consumer spending is at an all-time high. The deflationary impact of Federal spending is abating. . . . The worst phase of the inventory liquidation seems to be out of the

way. The machinery trades have picked up. New orders are reported to be increasing all around. And the offices of architects are bursting with new plans for homes, factories, power plants, pipelines and all sorts of commercial buildings.

The evidence, as I read it, is therefore that we are again entering a phase of economic expansion. But . . . the art of economic forecasting is very imperfect. The history of economics is strewn with the errors of its practitioners. We cannot dismiss the possibility that the present recovery may prove abortive, as have many recoveries in the past.

If that should happen, the question naturally arises: What further steps, if any, will the Government take to cope with the economic situation? Neither I, nor I believe anyone else, can answer this hypothetical question with the assurance of precise detail. I can say something, however, about the major premises on which the basic economic policy of our Government has recently proceeded, and this may perhaps provide a clue to the future.

THE FIRST premise of our governmental policy, as I see it, is that we are living in an age of revolution. Violent political currents are stirring the world. Since our system of free and competitive enter-

prise is on trial, the Government cannot stand aloof from the private economy but must be ready to take vigorous steps to help maintain a stable prosperity.

The second premise of our policy is that the Government must take preventive action and not trust exclusively to therapeutic measures. This means, among other things, that the Government must try to enlarge the potential role of automatic economic stabilizers—especially unemployment insurance. It means also that the Government must handle cautiously the fuel of inflation.

THE third premise of our policy is that the Government must conduct its affairs so as to inspire favorable expectations concerning the future on the part of people generally. This means that the Government must look to the long-range consequences of its actions, as well as to immediate results. . . . It means that the Government must use monetary policy in a flexible manner and assign it a very high priority in the arsenal of contracyclical weapons. It means that the Government must

give priority to tax reduction over expanded expenditures in times when an unbalanced budget becomes difficult to avoid. And it also means that the Government must use tax reduction with an eye to stimulating both consumption *and* investment, rather than the one or the other.

THESE are the basic premises that have controlled our business cycle policy in the recent past. If governmental policy in the months and years ahead continues to adhere to these premises; if Government resists doctrinaire thinking of both the right and the left; if Government steadily maintains a watchful eye on the state of business and consumer sentiment; and if it gives heed to the need of avoiding inflation as well as depression, we may, I think, be reasonably confident that—although we are likely to continue to have fluctuations in individual markets and to some degree even in the economy as a whole—we will avoid in the future the business depressions that have marred our brilliant record of free enterprise in the past. ■



Coffee Drinkers of the World

THE UNITED STATES is the world's largest consumer of coffee and cocoa, absorbing approximately 60 percent of the coffee exported and 40 percent of the cocoa. The largest importer of tea is the United Kingdom, which takes more than 40 percent of the world exports.

*Behind labor-management differences
there is a common awareness that—*

IT'S THE SALE THAT COUNTS

by Alexander R. Heron

IT IS COMPLETELY futile to deny that there are conflicts of interest between management and labor. It is idle to insist that their objectives are all the same or that their judgments can be unanimous as to how to reach those objectives which they do share. It is folly to ignore these differences and to attempt to avoid the issues of these conflicts of interest between the two groups which operate the productive machinery of our economy.

These conflicts of interest do exist, and not only in the field of economic goals. They exist also in the social objectives and the political objectives of so-called labor and so-called management.

Reprinted from *Reasonable Goals in Industrial Relations* by Alexander R. Heron, with the permission of the author and of the publishers, Stanford University Press. Copyright 1954 by the Board of Trustees of Leland Stanford Junior University. Based on lectures given at Reed College, Portland, Oregon, under the auspices of the Merrill Foundation for the Advancement of Financial Knowledge.

But we must keep the machinery of our economy running so that we all may have our supply of shelter and clothing and food, transportation, recreation and education. And in order to keep it running, we must adjust the differences in viewpoints, in goals, in judgments as to how these goals should be reached. It is necessary to make continuous adjustments, and the adjustments made this year, particularly on the questions that concern the economic goals, may not be valid adjustments next year. There is no unchanging status possible in a free economy.

In the economic field, the long-range goals of the various parties are much easier to reconcile than are the short-range goals. Those goals which are most important to us as management or to us as workers or union representatives in the short range are sometimes actually in conflict with our own desires and goals for the long range. On the other hand, some

of the short-range goals which provoke the immediate conflicts can frequently be best adjusted by measuring those goals against the truly long-range goals of the same party to the negotiation.

The first economic goal in the minds of people who work and the unions who represent them is wages. We have had a number of opinion surveys in recent years which have come up with the surprising result that, among a list of seven or eight items that workers consider important in their jobs, wages drop down to fourth or fifth or sixth place in the average answer. Security, opportunity, respectful treatment by the foreman—things like that—take precedence over wages in the selection made by employees.

It is an unproved opinion of mine, but one I hold very strongly, that a report of that kind is deceptive.

I think we should deceive ourselves if we believed that anything is fundamentally more important in the relationship between a man and his job than his wages. That is primarily the reason why he is working at all. Why he is working in this particular enterprise is influenced by a great many other reasons. But he has relegated to a place of minor importance the question of wages because he feels that it is already being taken care of

through agencies other than his own day-to-day activities.

CURIOUSLY, there is no opposition to this goal on the part of management, no opposition to the goal of high wages. There is no responsible management thinking in the United States today that favors low wages. On the other hand, management is constantly and necessarily interested in low costs. But some of the lowest costs in unit production can be achieved in industries and areas, in establishments and enterprises, which pay high wage rates. The problem for management is the cost of the unit of goods or services that is produced by the enterprise. And by the same token, management has learned, that a wide distribution of purchasing power in the form of wages is necessary to the growth and success of a private management business economy such as that in the United States.

Probably 95 percent of those who represent workers as bargaining agents or bargaining committees sincerely believe that higher profits for the enterprise fatten the pocketbooks and bank accounts of the management of the enterprise.

Actually, (management's) interest is not directly in profits. Theoretically, the profits could be increased as the wages are in-

creased, by increasing the prices to the consumers at a greater rate than the labor cost increases. But in the permanent development of the enterprise . . . that is not a road that can be safely followed. The prosperity and the progress of the enterprise depend upon its maintaining and increasing its volume of sales. It is here that the management group attempts to measure the reasonableness and feasibility of the wage demands of a union group with whom they are bargaining.

THE SECOND most important of the economic goals for those who work seems to be the goal of job security. It is a man's desire not only to have wages for the work that he renders this week, but to have assurance of the opportunity to render work for adequate wages in the weeks and months ahead.

With this goal in the abstract, management universally agrees. However, as against job security, management places a great deal of emphasis on job opportunity. Here a conflict arises because the organization that represents wage earners in collective bargaining must think in terms of the entire group. It must press for standards of opportunity that measure the group on very tangible bases, such as seniority. It cannot do its necessary political job with its

own members if it puts too much emphasis on the measure of individual opportunity.

I said that management is interested in opportunity, i.e., opportunity for individual workers, which makes for progress. Management should also be interested in seeing to it that any man on a promotion ladder who is the senior man for the next step should be prepared for the next step. In other words, intelligent management should have been making an investment in the training of that man so that when the vacancy occurs and the promotion selection must be made, all of the weight lies in favor of the man who has the weight of seniority on his side. He should be adequately trained, even though he may not be, in the judgment of management, the best man for the promotion.

THE PRIOR right to the best ten jobs in a plant is worth nothing at the bank if there are not ten jobs in the plant. If the enterprise has fallen flat, job security doesn't exist. It may have failed by management's yielding to demands that are not reasonable, or by its falling down on the responsibility of selling, on the responsibility of research, or on the responsibility for having an adequate supply of raw materials.

In the third important group of

economic goals which organized labor has set for itself, and which organized workers have accepted, is a group of cost items called fringe benefits. I am speaking now of the amounts of money that actually go into the hands of the worker in addition to the hourly rate. These include the overtime rate, the premium time, the call-in time, the premium rate for undesirable work of one kind or another, and the premium rate for a switch crew that has to take over an engine in addition to the road crew that brought it into the yard.

Then there is another area of fringe benefits which do not go into the pockets or the paychecks of the men who work. These are the protections that are bought for them, sometimes on a participating basis, sometimes entirely at the expense of the enterprise. Perhaps the best-known program in this area is hospital, medical and surgical care—so-called health and welfare plans.

THE reasonableness of any economic goal advanced by either party in the field of industrial relations must meet the final test. Does it help or hinder the selling of the time and services of every member of the enterprise, including those who work for wages and those who work for salaries as

management? No economic goal is reasonable if it unduly hampers the task of management in selling the time and services of the workers in the plant.

Everyone can sign an oath that he believes in that, and still we shall have labor disputes across the bargaining table. Does it hamper the selling job? How seriously does it hamper it? Are there other moves by which this disadvantage can be offset? Is it fair in our minds as well as in yours? Is there a standard of fairness that can exist? Do you know what your selling task is, Mr. Manager? Do you know that if you pay a higher wage rate we will work harder and bring down your labor costs? There is no danger that those in the industrial relations field will lose their jobs when both labor and management accept some of these truths that seem to be basic. There will still be problems and misunderstandings and disputes. Let me repeat—the reasonableness of the economic goals of either party can be best tested and fully tested by one essential measure. That is the effect that the achievement of those goals will have on the underlying goal in which all are interested—the goal of selling to the ultimate consumer the product of the work performed in the establishment. ■

BOOKS IN REVIEW

The automatic factory is a technical reality, but its economic impact opens up a whole range of problems for the new manager of industry



Reviewed by Robert P. Ulin

THE PRACTICE OF MANAGEMENT. By Peter F. Drucker. 392 pp. New York: Harper & Brothers. \$5.00.

THE WORD "AUTOMATION" has begun to acquire a certain magic for the business press. Scarcely an article appears that does not contain some reference to this newest development in mass production—the linking-up of all stages in the production process by automatic control systems. In the past few months, three new business magazines devoted exclusively to automatic controls have made their appearance, and by all accounts the subscription lists are long.

There are good reasons for this concentration on what the control engineers have achieved, for it is nothing less than a new industrial revolution. Electronic brains will, in the most advanced factories,

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direct the flow of work to and from machines, regulate the actions of the machines themselves, and test the quality of finished products. The saving in direct labor may run as high as 25 to 1.

But there is more to this than designing machines. And we need more than engineering guides. Automation will bring drastic changes in the economics of factory production. Higher capital requirements and more indirect labor may offset direct labor savings, unless the plant can run at very high volume. And this, in turn, leads to many complex problems connected with expanding markets.

For the most part, these are not problems in engineering. They are problems in economics and management: What size should a plant be to take advantage of automation? What kind of financing is required? What markets must be developed to support this production? And what kind of organization, managers and work-

ers does it take to make the automatic factory run—not just run as a set of machines, but at a profit to the enterprise and as an acceptable part of the community?

These are the sort of questions that Peter F. Drucker attempts to answer in *The Practice of Management*, published this month by Harper & Brothers. Dr. Drucker describes the challenge which automation has put to management in these terms:

“Traditionally a manager has been expected to know one or more functions. This will no longer be enough. The manager of tomorrow must be able to see the business as a whole and to integrate his function with it.

“The manager of tomorrow will have to be able to relate his product and industry to the total environment—and increasingly—to take in developments outside his own market and his own country.”

However, says Dr. Drucker, there won't be a new breed of men to perform these staggering tasks. Tomorrow's managers will be the same kind of human beings that we have today. The only way to train managers for an increasing *range* of functions is to define and simplify each particular function until it can be easily learned. When this is done, it becomes the job of today's managers, at every level, to train their successors in *all* the functions they may have to perform.

The greater part of Dr. Drucker's book is devoted to these principles, and to a detailed examination of how they work out in practical situations. It is, in this sense, a textbook on the practice of management. Case histories from the recent experience of such companies as Sears Roebuck, Ford and International Business Machines make it clear how much truly scientific management is being applied in American industry today—and how far the majority of companies still have to go to reach these standards.

PROBABLY the greatest difference between well-managed and less well-managed companies today is the emphasis that the top firms are putting on long-range planning—on what Dr. Drucker calls “managing by objectives.” This involves a whole range of decisions, but the primary ones are in marketing. What product should the company concentrate on? How large a share of the market for its product should it aim to achieve? How fast is this market growing, and what sales volume must the company shoot at to maintain its share of the market in 1960 or 1970?

Sales forecasting of this type is essential for any management that aims to make its enterprise a growth company, or indeed to keep from falling behind in the

competitive race. To fall behind at all may soon mean to drop out of the race entirely. If anyone doubts it, let him note what has happened to the smaller automobile companies and what threatens even so large a company as Chrysler, as the result of misjudging the size and tastes of the postwar automobile market.

MOST people look on technological innovation as a surprise factor that upsets management decisions. But Dr. Drucker regards it as an objective that can be planned. A company should have a long-range research program and plan for periodic innovations and the expansion of markets that goes with them. It is impossible to achieve a long-range marketing program that does not take innovation into account, and it is useless to make innovations without a marketing program that takes full advantage of them. This, of course, means not only market research, but choosing the correct distribution channels, making decisions on pricing and services, training an adequate sales force.

Dr. Drucker's emphasis on these points is well taken. As soon as we have any large number of automated plants, with their tremendous capacity for high-speed output, intelligent planning for markets becomes the price of survival. This is already the case in

the chemical industry, which has a large amount of push-button capacity. Where the products have been well-chosen, the plants are running full scale. But in other cases, these great facilities are idle because markets are not ready to absorb their output.

A good example is the Dow Chemical Company, which has just announced a major change in its long-run marketing objectives from heavy industrial chemicals to packaged consumer products. The only way Dow can utilize the basic capacity it has built up is to put some of these chemicals into consumer products, which it will market under its own brand, advertise on television, and support with a new sales organization.

All this seems a long way from the original problems of automated production, but it typifies the broadened view that management needs to operate such plants successfully.

Facilities planning—advance plans for new plants and equipment—also gets a good deal of attention in this book, as does financial planning—arranging for the necessary supply of capital. Quite a lot of this type of planning is being done at present. Earlier this year, the McGraw-Hill Department of Economics made a survey which showed that over half of all manufacturing

companies plan capital expenditures at least two years ahead, and 17 percent as much as five years ahead. This survey may have a bias toward the practice of large companies, but there is no doubt that facilities planning generally is on a longer range basis today than it was a few years ago. Whether it is sufficiently integrated with planning for markets and planning for innovation is a good deal more debatable.

THIS reviewer has more doubts than Dr. Drucker does about the effectiveness of even the best methods now used for calculating the amounts of future investment in plant facilities. As automation tends to increase the scale of investment, the best policy for the future may well be simply to recognize an increasing element of risk in these decisions.

The remaining sections of *The Practice of Management* deal with areas that have received more coverage in other texts: the best form of managerial organization, and the best ways to manage workers and their work. This is, of course, the old problem of job simplification, to which scientific management was first applied. But the difference in an automated factory is that jobs will not become more repetitive, as they did on Henry Ford's assembly line.

The new objective of work simplification will be to enable the worker to handle a variety of operations. This is what he must do, if he is to handle the controls for a machine that does a variety of operations, depending on how the controls are set.

THUS the automatic factory—properly managed—holds the promise of more satisfying, more challenging jobs for both industrial workers and industrial managers. In both cases, the job horizons are broadened. And this brings us back to Dr. Drucker's original theme: that management must think more broadly if it is to make the new technology a thing that will benefit both the business enterprise and the community of which it is a part.

In this, he is undoubtedly right, for there has seldom been a time when the public looked more expectantly to business management for the age of miracles. We have today a business and scientific press that has given wide publicity to our technical advances. We have a Government staffed by management men in key posts and relying on private business management for support in many of its key programs. All this has been heralded as promising a better life for the average citizen. It is up to the management men to make good on the promise. ■